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Institutional Equities

BEARINGS SECTOR

'BEARING' FRUIT

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Bearings Sector

4 January 2016

Initiating Coverage

'Bearing' Fruit

We are initiating coverage on Indian bearings sector with a positive view. With the principle of mobility depending on circular and linear motions, the pursuit to improve efficiency puts areas such as friction, emission, mileage, warranty, cost of ownership, light weight etc, at the forefront. The capital-intensive and technology-driven bearing industry is likely to clock at least a low double-digit CAGR over FY15-FY20E, beating a decade-long higher single-digit CAGR. However, leading players will continue to grow at a high-teen CAGR. Key drivers for bearing industry's growth are likely to be a broad-based revival in the economy, opportunities in railway modernisation/Dedicated Freight Corridor (DFC)/metro train projects, introduction of new automobile models, technology advancement in bearings, indigenisation of industrial bearings, growing market size of peripheral services, rising uptime requirement in user industries, etc. We believe that the local franchise of global technology leaders along with couple of Indian manufacturers will continue with their combined dominant position (>80% market share). This is on account of technology competence, strong relationships with original equipment manufacturers or OEMs, financial capacity to cater to large investment demand, individual specialisation in certain types of bearings, etc. We initiate coverage on Timken India/NRB Bearings/SKF India with Buy/Buy/Accumulate ratings, respectively.

Recent policy announcements create a favourable pitch: The policy initiatives in past few quarters are likely to augur well for bearing industry's revenue growth in coming quarters and includes a) Auction of coal mines, b) Efforts to revive stalled infrastructure projects across road, power, port sectors etc, c) Reinstatement of accelerated depreciation in wind energy segment, d) Implementation of advance emission norms and ABS or anti-lock braking system in automotive sector, e) Modernisation and expansion of Indian Railways, DFC project and the setting up of metro rail network in more than 20 cities across India, f) Declining interest rates and g) Recently announced average pay hike of 23% for government employees by Seventh Pay Commission.

Bearing industry expected to post a 9%-10% CAGR over FY15-FY18E: Over the past nine years, YoY growth of organised bearing industry in India and YoY aggregate revenue growth of large six listed players (SKF India, FAG, Timken India, NRB Bearings, MENON, ABC) implies a gross domestic product or GDP multiplier of 1.2x and 1.9x, respectively. The industry clocked a CAGR of ~9% and the aggregate revenue of these six leading players witnessed a CAGR of 13% over the same period. We expect GDP to grow 7.7% on an average over FY15-FY18E, which implies the industry is likely to post a CAGR of 9%-10% over the same period.

Aggregate market share of leading five players rises in past five years: The bearing market is polarised towards leading five players - SKF India, National Engineering Industry (NEI), FAG Bearings (FAG), Timken India, NRB Bearings - given the fact that their aggregate market share increased from 61% in FY06 to 82% in FY15.

Bearing sector is a high-entry barrier sector globally: In India and globally also more than 60% of organised bearing market is controlled by five players. Strong OEM relationships, technological competency, high investment capability and widespread distribution network are key factors for success.

Sound financial health of bearing companies in India: Most of the leading players under our coverage have mid-teen RoE and RoCE with double-digit EBITDA margin. They have net debt-free balance sheets (except NRB Bearings), positive cash flow from operations and clocked revenue and PAT CAGR of 14% and 18%, respectively, over the past 15 years.

Key risks: Slower-than-expected revival in the economy and rising competition might take a toll on margins and market share, loss of business for listed entities given the presence of wholly-owned group companies of their parent companies in India.

View: Positive

Sector: Industrial Goods

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Company	Rating	Market cap (Rsbn)	Market cap (US$bn)	CMP (Rs)	TP (Rs)	Up/ Down (%)	EPS (Rs) CY15E/ FY16E	EPS (Rs) CY16E/ FY17E	EPS (Rs) CY17E / FY18E	PE (x) CY15E /FY16E	PE (x) CY16E/ FY17E	PE (x) CY17E / FY18E	*RoE (%) CY15E/ FY16E*	*RoE (%) CY16E/ FY17E*	*RoE (%) CY17E / FY18E*
Timken India	Buy	37.2	0.6	550	650	18	13.0	15.5	18.6	42.3	35.5	29.6	*19.0*	*19.9*	*20.6*
SKF India*	Accumulate	64.8	1.0	1,229	1,290	5	34.6	44.0	51.6	35.5	27.9	23.8	*15.2*	*13.9*	*14.7*
NRB Bearings	Buy	13.5	0.2	140	167	19	5.8	7.1	8.3	24.1	19.7	16.9	*19.4*	*20.4*	*20.5*
FAG Bearings	NA	71.9	1.1	4,329	NA	NA	116.9	138.9	169.8	37.0	31.2	25.5	*15.99*	*16.4*	*17.07*

Note: *=FY16E EPS is annualised, FAG Bearings numbers are sourced from Bloomberg, NA = Not applicable; *Source: Company, Nirmal Bang Institutional Equities Research*

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Investment rationale

Universal application of bearings and its criticality in machinery, engine or other equipment makes this product a very valuable component of the system. The demand for bearings is derived from a very wide spectrum of the user industry - primary sources (OEMs) as well as secondary sources (after-market). Most of the industries globally are either direct or indirect consumers of bearings. Despite being an industrial product, the demand for bearings is less cyclical mainly on account of a definitive product replacement cycle and a large number of users in after-market segment. Hence, despite the slowdown in the economy and subdued new investments in the recent past, bearing companies with a noticeable presence in after-market segment have shown growth in revenue, albeit at a lower rate. This helps, especially capital and technology- intensive industry like bearing to remain afloat during an economic downturn. In India, over the past 15 years, almost all of the leading bearing companies clocked a double-digit revenue CAGR, beating organised bearing industry CAGR, and none of them incurred a loss at the net level.

Exhibit 1: Revenue growth of leading players was higher than bearing market size growth

Gross Revenue (Rsmn)	FY06/CY05	FY15/CY14	*CAGR (%)*
SKF India	8,975	25,000	*12.1*
FAG	4,627	17,320	*15.8*
NEI	5,212	14,973	*12.4*
Timken India	3,252	9,240	*12.3*
NRB Bearings	2,933	6,930	*10.0*
Market size (Rsmn)	**41,000**	**87,000**	***8.7***

Source: Company, Industry, Nirmal Bang Institutional Equities Research

Despite being capital-intensive and having a positive working capital cycle, bearing companies had positive cash flow from operations most of the years in the past 15 years and were even able to generate free cash flow for a substantial number of years. RoE and RoCE of bearing companies are in high-teens and at least leading listed bearing companies have a net debt-free balance sheet. Most of the leading global players have started manufacturing 'import substitute' industrial bearings in India through their respective wholly-owned subsidiaries. However, these bearings are sold in India only through the listed entity of the group. This has substantially reduced forex risk, lead time for product delivery and in turn cost structure with margin improvement on traded goods for listed entities. Listed entities pay royalty and trade mark fees to their respective parent companies for access to technology. However, it is not very high currently. Most global companies have set up technology centres in India and in many cases India is only second country in Asia after China to have these centres.

Despite the fragmented nature of the industry (more than 300 manufacturers), dumping by China and other countries, large quantity of spurious products along with rising competition from new global entrants in Indian market, existing five leading players (SKF India, NEI, FAG, Timken India, NRB Bearings) have been able to improve their market share over the past 10 years, mainly on account of the shift in the industry towards the organised segment, their OEM relationships, wide distribution network in after-market segment etc. The bearing market in India as well as overseas is dominated by five players (SKF AB, Schaeffler AG, Timken Co, NTN, NSK) and in that sense it's a high entry barrier business, given the technology requirement, investments needed and importance of OEM relationships. We do not see any immediate threat to aggregate market shares of top five bearing manufacturers in India for the next few years. The growth of bearing industry is tied to growth of the underlying economy measured by real GDP growth and Index of Industrial Production or IIP growth. The automotive industry is single-largest consumer of bearings. We believe India's domestic bearing industry is estimated to grow 9%-10% over FY15-FY18E on account of likely broad-based revival in the economy, as indicated by GDP and IIP forecasts by various analysts for the next three years. Also, defence, metro rail and DFC (Dedicated Freight Corridor) projects are likely to boost demand for high-tech large-sized bearings which essentially enjoy limited competition. Other important factors which are going to assume more importance are OEMs' rising stringency or insistence on adhering to globally set benchmarks on parameters like noise, emission, weight, mileage, cost of ownership, vibration etc. We believe in such a scenario the companies with technological leadership and strong investment potential will remain in the game. This will lead to polarisation of bearing industry towards a few leading players to accelerate further. We are positive on bearing sector.

Exhibit 2: Financial snapshots

Company	Rating	Market cap (Rsbn)	Market cap (US$bn)	CMP (Rs)	TP (Rs)	Up/ Down (%)	EPS (Rs) CY15E/ FY16E	EPS (Rs) CY16E/ FY17E	EPS (Rs) CY17E / FY18E	PE (x) CY15E /FY16E	PE (x) CY16E/ FY17E	PE (x) CY17E / FY18E	*RoE (%) CY15E/ FY16E*	*RoE (%) CY16E/ FY17E*	*RoE (%) CY17E / FY18E*
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Note: *=FY16E EPS is annualised, FAG Bearings numbers are sourced from Bloomberg, NA = Not applicable

Source: Company, Nirmal Bang Institutional Equities Research

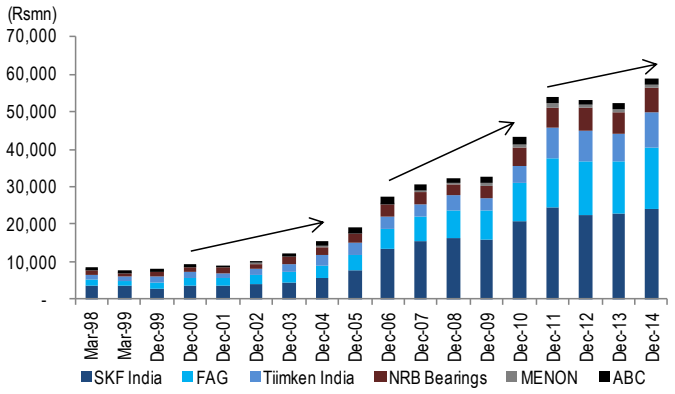
Exhibit 3: Average PE ratios

Particulars (x)	One year forward			Two year forward		
	3 year average PE	5 year average PE	10 year average PE	3 year average PE	5 year average PE	10 year average PE
SKF India	26.4	22.8	17.4	23.6	21.4	16.7
Timken India	29.3	27.4	22.3	23.6	25.3	20.6
NRB Bearings	14.7	12.4	16.3	12.4	11.3	17.6
FAG	24.3	20.4	15.0	19.8	18.2	13.5

Source: Company, Bloomberg, Nirmal Bang Institutional Equities Research

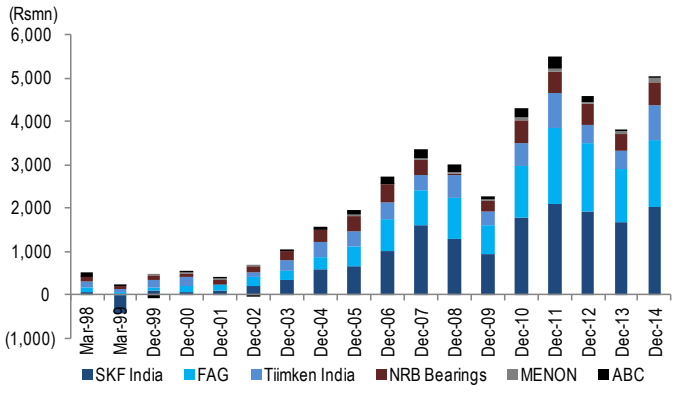
Financials of leading bearing companies (*Aggregate numbers of SKF India, Timken India, FAG, NRB Bearings, ABC and MENON*)

Exhibit 4: Revenue growth



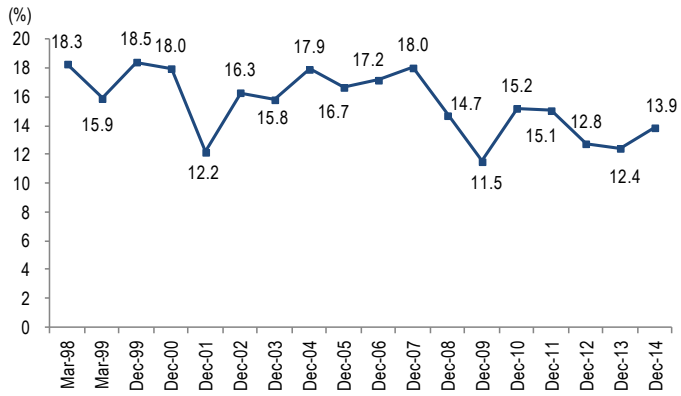
Source: Ace Equity, Nirmal Bang Institutional Equities Research

Exhibit 5: PAT growth



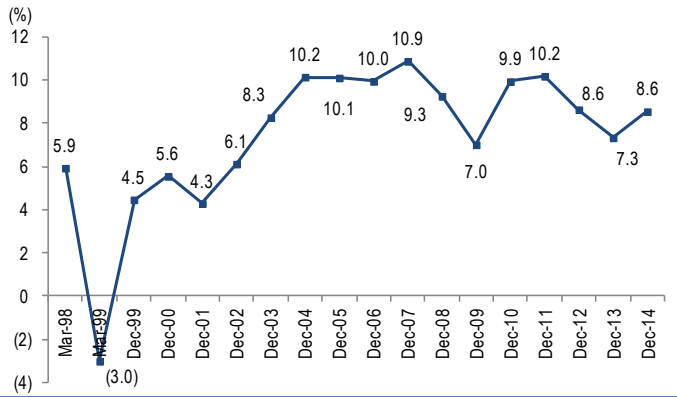
Source: Ace Equity, Nirmal Bang Institutional Equities Research

Exhibit 6: Aggregate EBITDA margin of leading bearing companies



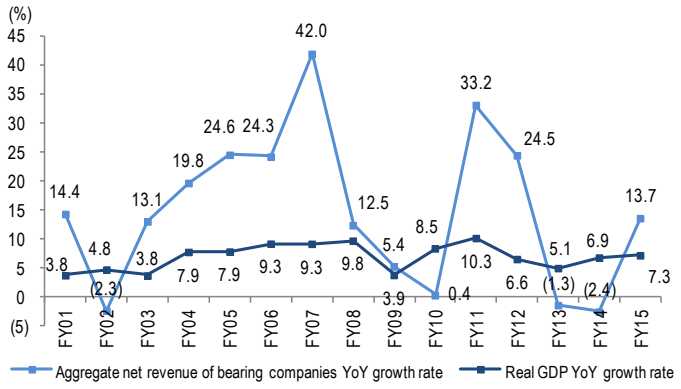
Source: Ace Equity, Nirmal Bang Institutional Equities Research

Exhibit 7: Aggregate PAT margin of leading bearing companies



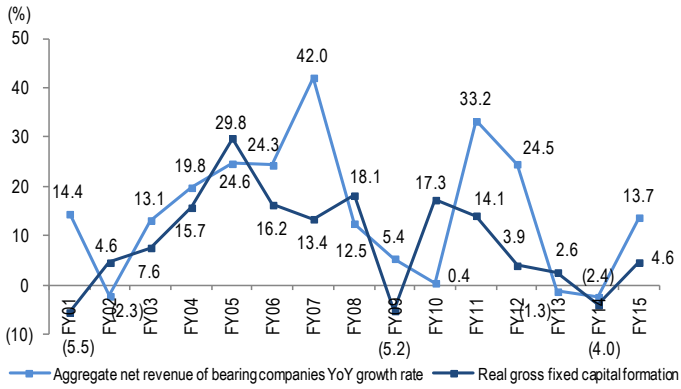
Source: Ace Equity, Nirmal Bang Institutional Equities Research

Exhibit 8: Aggregate revenue growth and real GDP growth



Source: Ace Equity, Central Statistical Organisation or CSO, Nirmal Bang Institutional Equities Research

Exhibit 9: Aggregate revenue growth and real GFCF*

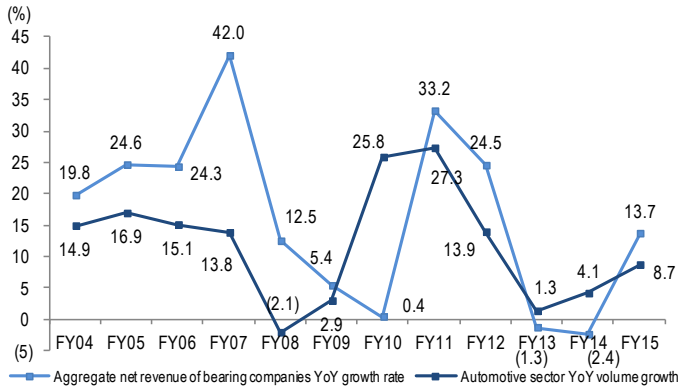


Note: *= GFCF-Gross fixed capital formation

Source: Ace Equity, CSO, Nirmal Bang Institutional Equities Research

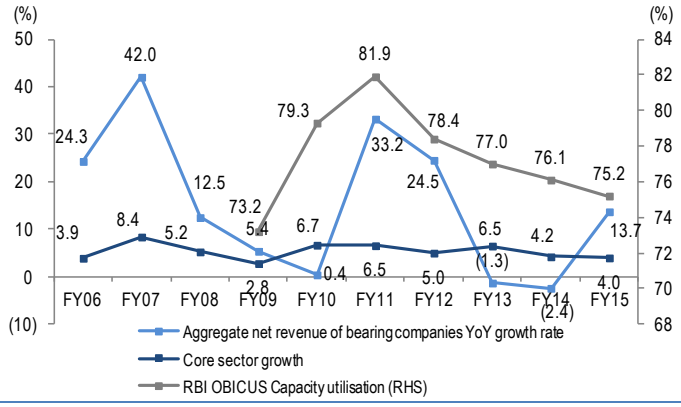
Financials of leading bearing companies (*Aggregate numbers of SKF India, Timken India, FAG, NRB Bearings, ABC and MENON*)

Exhibit 10: Aggregate revenue growth and automotive sector growth



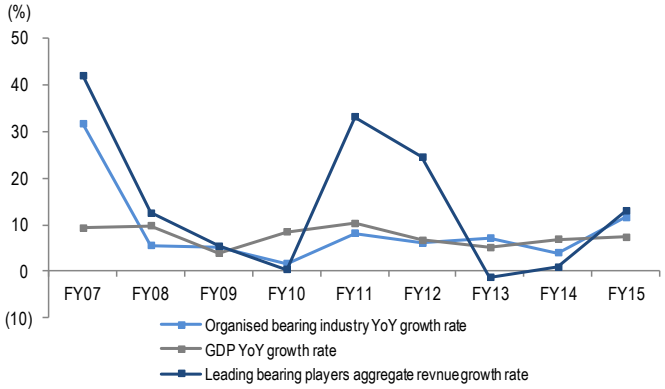
Source: Ace Equity, Society of Indian Automobile Manufacturers or SIAM, Nirmal Bang Institutional Equities Research

Exhibit 11: Aggregate revenue growth, core sector growth and RBI OBICUS capacity utilisation



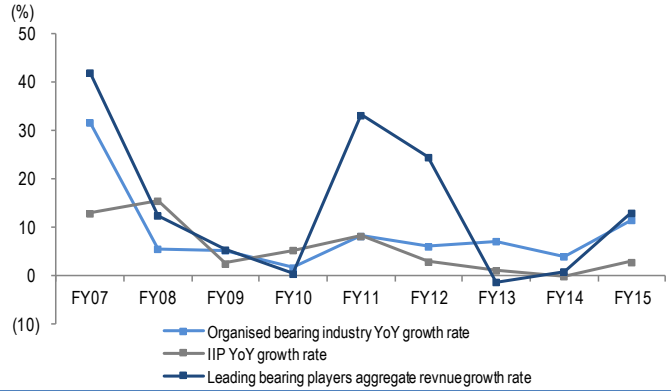
Source: RBI, Ace Equity, Nirmal Bang Institutional Equities Research

Exhibit 12: Aggregate revenue growth, organised industry growth and real GDP growth



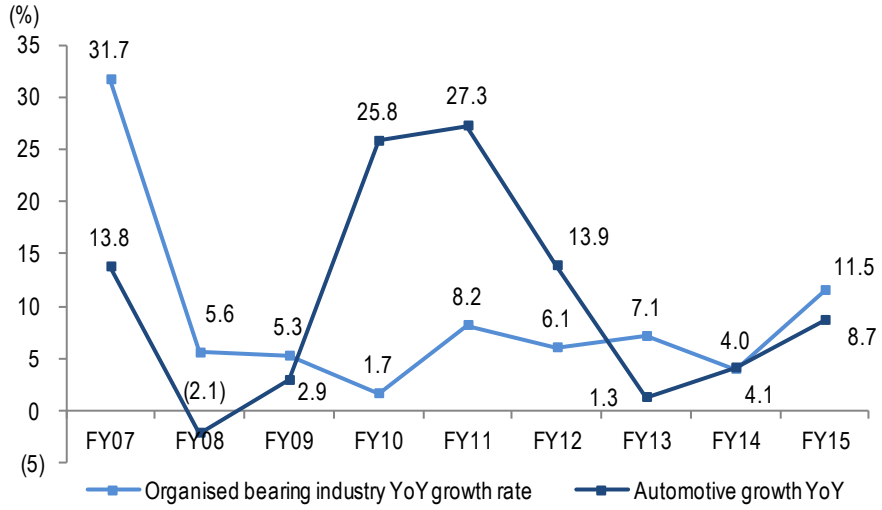
Source: Ace Equity, Industry, CSO, Nirmal Bang Institutional Equities Research

Exhibit 13: Aggregate revenue growth, organised industry growth and IIP growth



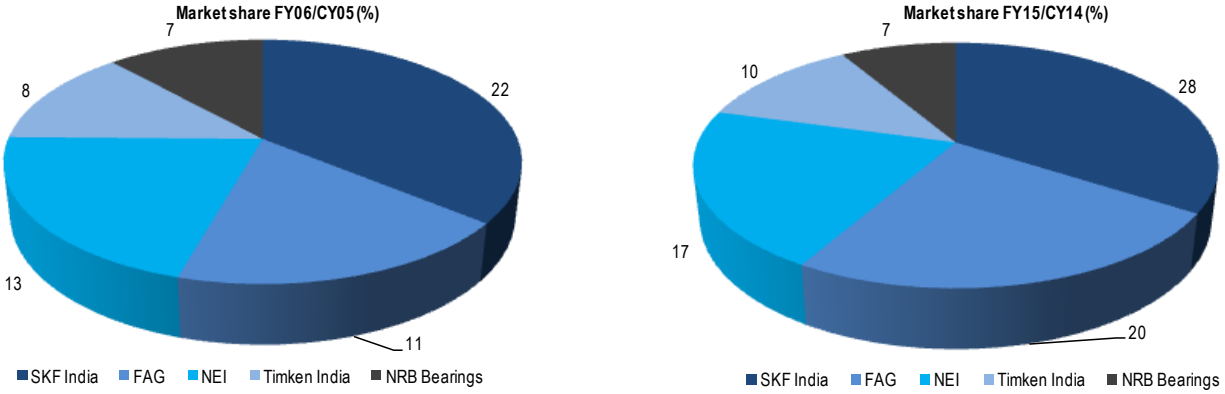
Source: Ace Equity, Industry, CSO, Nirmal Bang Institutional Equities Research

Exhibit 14: Automotive industry's YoY growth and organised bearing industry's growth



Source: Industry, SIAM, Nirmal Bang Institutional Equities Research

Exhibit 15: Market share movement of leading players over a decade



Source: Industry, Nirmal Bang Institutional Equities Research

Timken India (Rating: Buy, TP: Rs650, Upside: 18%)

Timken India (TIL), the leading manufacturer of TRBs (tapered roller bearings) with an overall market share of 10% and 45% in TRB segment, is set for high-octane growth compared to its peers on account of: A) Revival in demand for commercial vehicles or CVs mainly medium and heavy commercial vehicles or MHCVs, B) Thrust on exports, likely improvement in capacity utilisation across user industry, railway business opportunity led by spurt in rolling stock addition/up-gradation, refurbishment etc, and C) Expansion of metro rail network to more cities, high-speed railway corridors, Dedicated Freight Corridor (DFC) project etc. Timken India has the distinction of being the only indigenous manufacturer of freight application bearings for railways in the listed entity. Apart from bearings, Timken India is determined to diversify into areas like mission critical higher capacity industrial gearbox refurbishment, lubrication, maintenance of rolling mills in steel plant etc. We expect a revenue CAGR of 17% over FY15-FY18E, given the dominant market share in high-growth railway and MHCV segments. PAT CAGR is likely at 16%. We expect margins to remain at an elevated level witnessed in FY15, given the indigenisation of raw materials and thrust on exports led by parent company's strategy of sourcing products from low-cost destinations globally.Timken India's return ratios are better than its peers. We have assigned Buy rating to the stock with a target price of Rs650, which discounts FY18E EPS of Rs18.6 by 35x.

SKF India (Rating: Accumulate, TP: Rs1,290, Upside: 5%)

SKF India (SKF) is determined to regain its market share in passenger vehicle or PV segment as it won some new contracts to supply GEN3HUB (third generation) bearings. The company successfully qualified for railway business for the freight application bearings. Introduction of Antilock Braking System (ABS) in commercial vehicles or CVs from October 2015 and the government's recent decision to make ABS applicable to two-wheelers above 125cc engine capacity as well from April 2017 is likely to augur well for SKF India. The company remains the most diversified play, retaining its top position with largest share of ~28% in domestic organised bearing market. This is led by a whopping ~45% market share in the largest category - ball bearing (~55% of bearing industry). SKF India has a strong presence in after-market segment despite a higher proportion of spurious products circulating there. With technology proficiency, recent contract wins from original equipment manufacturers or OEMs, focus on complementing bearings with other services/products from the parent company's stable and likely broad-based revival in India's economy, we believe SKF India will tide over near-term headwinds. Likely revival in the economy over the next few quarters coupled with a few positive signals from CV and PV segments on the automotive side augurs well for SKF India. However, SKF India will continue to look for market share gains, which may be at the cost of margins. Therefore, despite further gains likely from lower commodity prices, overall margin trajectory may remain stable at 11.6%. We expect the company's revenue to clock a CAGR of 9% over CY14-FY18E against 4% in CY10-CY14. Likely improvement in operating leverage, favourable revenue mix, increase in the proportion of traded goods from Ahmedabad plant and a well-controlled working capital cycle may lead to a PAT CAGR of 10.0% over the same period. We have assigned Accumulate rating to the stock with a target price of Rs1,290 based on 25x FY18E EPS of Rs51.6.

NRB Bearings (Rating: Buy, TP: Rs167, Upside:19%)

NRB Bearings (NRB) is the largest needle roller bearing player in India with ~70% segmental market share and the fifth-largest bearing company with ~7% share in the country's total organised bearing market. It is one of the two organised bearing players of Indian origin among top five bearing players in the country. The company has identified needle roller bearings as its focus area, which was the largest contributor to revenue at 42% in FY15. NRB Bearings has globally competent technology and is a strong exporter with ~23% revenue contribution and a robust CAGR of 41% over FY10-FY15. Robust operating margin and RoE profile are the result of strong relationships with automotive OEMs (revenue contribution 60%-65%) right from the product development stage, and technological competency as well as importance given to profitability. NRB Bearings does not concentrate on volume and prefers not to compete aggressively in price-competitive segments like sedan in passenger vehicle or PV category. After hiving off industrial bearing business, NRB Bearings has become a play on automotive sector. We expect a revenue CAGR of 11% and a PAT CAGR of 16% over FY15-FY18E led by likely revival in domestic automotive sector and strong exports. We have assigned Buy rating to the stock with a target price of Rs167, which discounts FY18E EPS of Rs8.3 by 20x.

Features of Indian bearings industry

a) Indian bearing industry will continue to be dominated by leading global players

With the organised market size at Rs85bn-Rs90bn as per latest estimates, India's bearing industry is skewed towards local listed franchise of leading global players like SKF AB, Timken Co, FAG-Schaeffler AG and players of Indian origin like NRB Bearings and NEI (National Engineering Industry). The global players are present in India either through listed entities and or wholly-owned subsidiaries or joint ventures. The top five players (SKF India, FAG, NEI, Timken India, and NRB Bearings) enjoy around 82% market share. The organised sector primarily caters to OEMs which are predominantly in automotive, railways and other industrial sectors. The unorganised sector primarily caters to replacement market and continues to serve the very low-end market as well as it forms the core of counterfeit products. Technology edge on account of parentage, innovation and capacity to invest allow each of these large players to identify their respective niche area and concentrate on it to take lead in that product category.

b) Each player has core competency in terms of technology and leadership in a particular bearing type

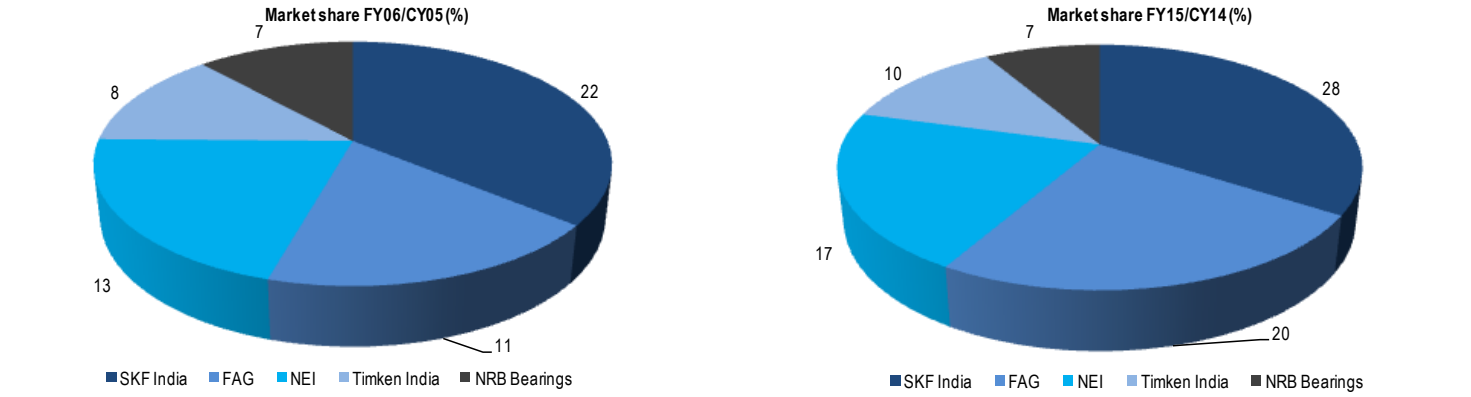
SKF India has its presence in all types of bearings and enjoys the leadership position in overall bearing market with ~28% market share. The company is the largest player in ball bearings with ~45% market share. Timken India is not present in the largest segment of ball bearings, but enjoy overall market share of 10%. This is mainly on account of the leadership in tapered roller bearings (TRBs) segment with segmental market share of 45%.Timken India is a play on commercial vehicles or CVs especially on medium and heavy commercial vehicles or MHCVs and industrial bearings. FAG derives major revenue from cylindrical and spherical roller bearings and commands the leadership position. The company has a sizable presence in wheeling applications in automotive sector. FAG commands an overall market share of 20%. The company is present in most of the bearing types across automotive and other industrial sectors. NRB Bearings is a play on automotive sector with the distinction of being the largest player in needle roller bearings (NRBs). The company has a nearly 70% market share in NRBs and its overall market share is ~7%. Thus, these companies enjoy dominant position in niche areas which provide them with high-growth opportunity in their respective segments. Technology competence, either through parent or joint ventures, investment in innovation and manufacturing capabilities will make sure that the ranking will not alter significantly and provide a strong opportunity for growth. India's bearing sector is equally divided between automotive and other industrial sectors. Except NRB Bearings, all other leading companies are present in both sectors. Besides OEMs, these players have a significant presence in after-market segment. Strong presence in after-market segment mitigates the risk arising out of cyclicality in OEM business and helps in protecting margins in the capital-intensive industry.

Exhibit 16: Each player is leader in particular type of bearing

Particulars	*Overall market share (%)*	Specialised and Leadership in	*Market share in specialised product (%)*	Nearest competitor
SKF India	*28*	Deep groove ball bearing	*45*	FAG
FAG	*20*	Spherical and Cylindrical ball bearing	*40*	SKF India, Timken India
NEI	*17*	Spherical and Cylindrical ball bearing	*20*	Timken India
Timken India	*10*	Tapered roller bearing	*45*	NEI, FAG
NRB Bearings	*7*	Needle roller bearing	*70*	INA

Source: Industry, Nirmal Bang Institutional Equities Research

Exhibit 17: Market share movement of leading players over a decade



Source: Industry, Nirmal Bang Institutional Equities Research

c) Indian arms of MNCs account for a small portion of consolidated operations of respective parent companies

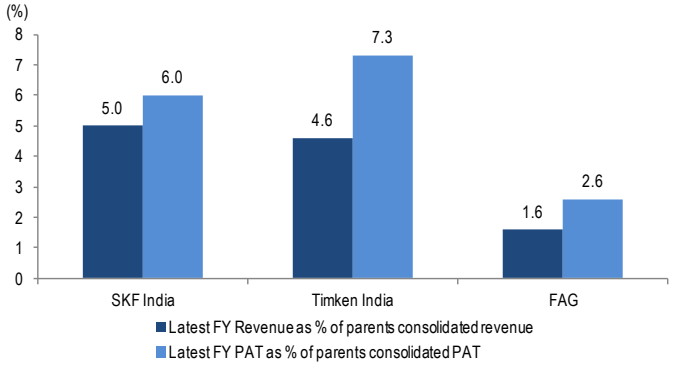
Share of Indian players in total global revenue of parents is in lower single-digits ranging from 2%-7%.

Exhibit 18: Position of Indian listed entities in the group

Company	Latest FY Revenue as % of parents consolidated revenue	Latest FY PAT as % of parents consolidated PAT
SKF India	5	6
Timken India	4.6	7.3
FAG	1.6	2.6

Source: Company, Nirmal Bang Institutional Equities Research

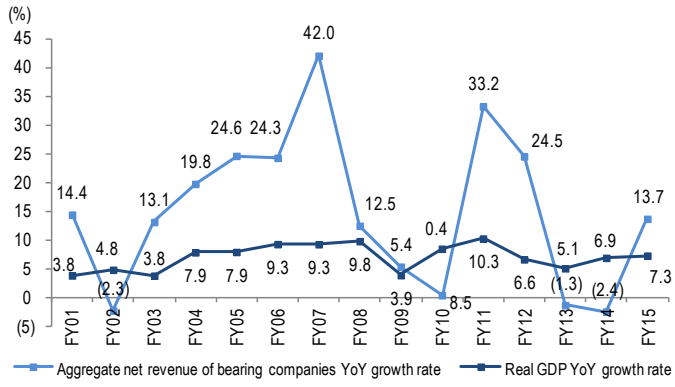
Exhibit 19: Position of Indian listed entities in the group



Source: Company, Nirmal Bang Institutional Equities Research

d) Growth in demand for bearings is directly linked to the growth in the economy

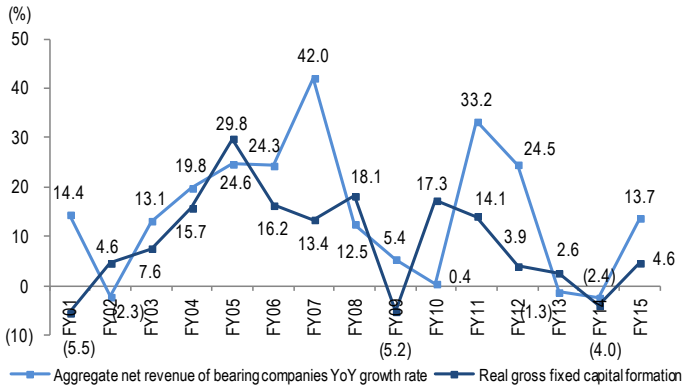
Exhibit 20: Aggregate net revenue growth and real GDP growth



Note: *=Aggregate net revenue of SKF India,Timken India, FAG, NRB Bearings ,ABC,MENON

Source: Ace Equity, CSO, Nirmal Bang Institutional Equities Research

Exhibit 21: Aggregate revenue growth and real GFCF*



Note: *=GFCF-Gross fixed capital formation

Source: Ace Equity, CSO, Nirmal Bang Institutional Equities Research

e) Capital-intensive business with large investments required in maintaining product quality

Bearing industry is capital-intensive in nature. Fixed asset turnover (adjusted for traded goods) is 1.3x to 1.5x in bearing industry. High-technology machinery is required to manufacture bearings which includes machinery for screw machining, grinding, heat treatment, etc. Moreover, an equal amount of investment is needed for consistent adherence to quality in research and development or R&D, laboratories, gauges, and high-precision machinery to keep the tolerance level within limits. In fact our interaction with industry experts suggests that the cost incurred on quality maintenance accounts for up to 50% of total cost of a bearing. Homologation part also takes a lot of time, thereby adding to costs as lot of costs and also time are required to arrive at precision part of a bearing before it gets ready for commercial use. In such an environment, lower economic development could lead to under-utilisation of expensive resources and lesser absorption of fixed costs.

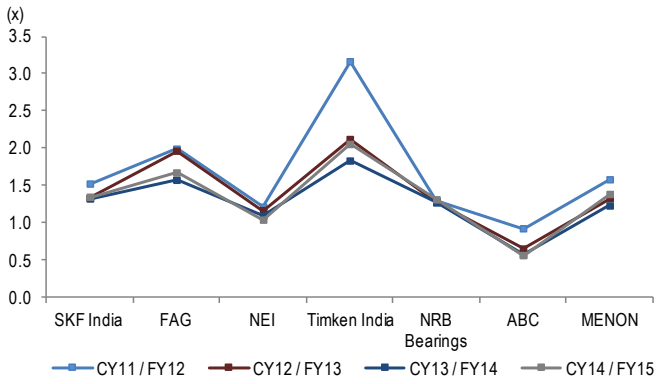
Exhibit 22: Fixed asset turnover *

Fixed asset turnover*	CY11 / FY12	CY12 / FY13	CY13 / FY14	CY14 / FY15
SKF India	1.52	1.33	1.32	1.34
FAG	1.99	1.96	1.57	1.67
NEI	1.21	1.17	1.09	1.04
Timken India	3.16	2.12	1.83	2.05
NRB Bearings	1.29	1.28	1.27	1.31
ABC	0.92	0.65	0.57	0.56
MENON	1.58	1.33	1.23	1.38

Note: *=Adjusted for revenue from traded goods

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 23: Fixed asset turnover *



Source: Company, Nirmal Bang Institutional Equities Research

f) Of total domestic demand, around 35%-40% is met through official imports

Out of total estimated market size of Rs85bn-Rs90bn, official imports of bearings by leading multinational players from their respective parent overseas occupy 30%-35% share. The imports by other non-listed and small players contribute 5%-10% to the total imports. For leading multinational players, these imports form a part of traded goods for revenue classification of companies. Official imports includes low volume, high-end and large-sized industrial bearings. They enjoy lower margin, but high RoCE. Further, over the past few years, equivalent amount of imports of low-end and small-sized bearings, mainly for automotive applications from Asian countries, especially China, have increased significantly. Ball bearing is the largest category of imported bearings and occupies upwards of 50% share in total imports of bearings.

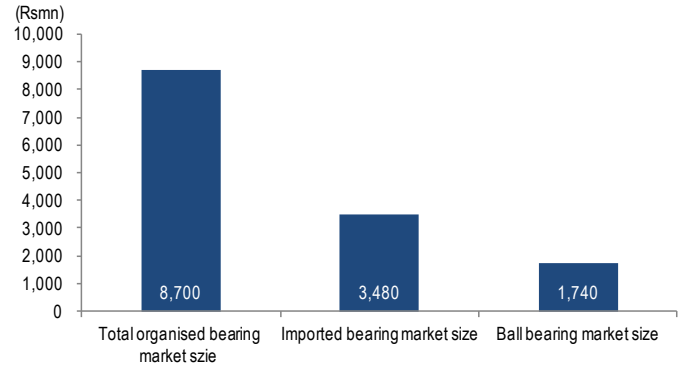
Following slowing demand in developed markets of the US and in Europe, cheap imports from China and other South–East Asian countries exerted pressure on Indian suppliers to price their products lower and are proving to be a big threat for domestic bearing industry, as many customers opt for cheaper imported bearings. Ready supply chain and strong focus on reducing costs, minimising waste and increasing efficiency of operations are main ways to counter the same.

Exhibit 24: Imported bearings' share

Particulars (Rsmn)	
Total organised bearing market size	8,700
Imported bearing market size	3,480
Ball bearing market size	1,740

Source: Industry, Nirmal Bang Institutional Equities Research

Exhibit 25: Exhibit : Imported bearings' share



Source: Industry, Nirmal Bang Institutional Equities Research

g) Focus on after-market segment, which forms 35%-40% of total demand, is to reduce cyclicality

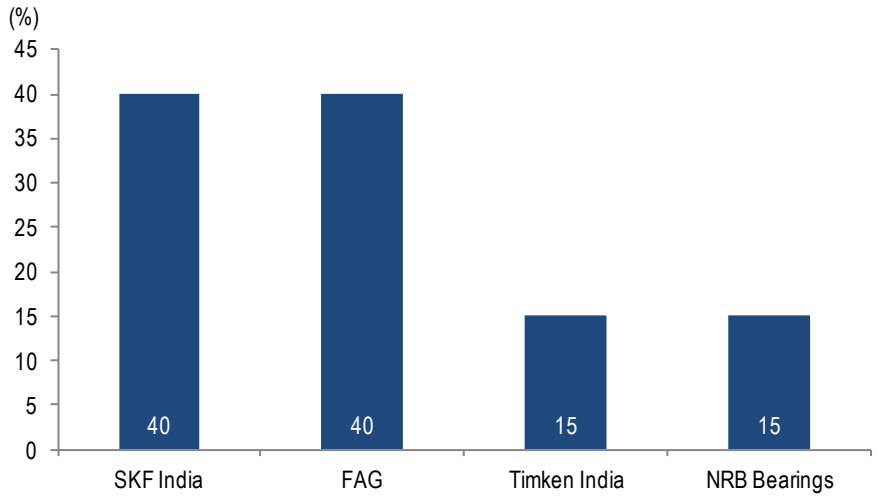
Development of after-market demand is linked to capacity utilisation and new projects in sectors such as automotive, steel, mining, cement, power and paper to name a few. Bearings have a life ranging from a few days to a few years depending on the application, operating conditions and the user industry. Typically, in automotive segment, bearings come for first replacement after three years in case of personal use vehicles and between three to six months in case of commercial vehicles. However, on industrial segment bearings front, the criteria for replacement are reliability, efficiency, performance and break-down. First three are more important. So there can't be a weighted average replacement cycle. For example, in steel industry, certain types of bearings require to be replaced every week and other types of bearings can be used without replacement for six to seven years. Exposure to after-market segment allows bearing manufacturers to tone down the cyclicality risk of OEM slowdown.

As regards the recent Competition Commission of India's (CCI) ruling on automobile OEMs' authorised service centres in respect of restricting the sale and supply of genuine spare parts in open market, industry experts believe it will change the dynamics in after-market in terms of the way original components are bought and sold.

After-market offers more competition than OEMs to bearing manufacturers. However, our interaction with industry experts suggests that the pricing power is better in after-market than OEM, of course, subject to the type of bearing.

With renewed focus on quality and reliability, after-market is increasingly turning to the organised sector The trend in after-market especially in the industrial after-market is clearly towards reduced total cost of ownership (TCO). The customers are also looking for very short lead times. At the same time, the competitive intensity in this segment continues to increase as more and more brands - local as well as imported - compete with each other to get a share of after-market demand. After-market revenue of leading bearing players is in the range of 15%-40%.

Exhibit 26: After-market revenue as % total revenue for listed four players



Source: Company, Industry, Nirmal Bang Institutional Equities Research

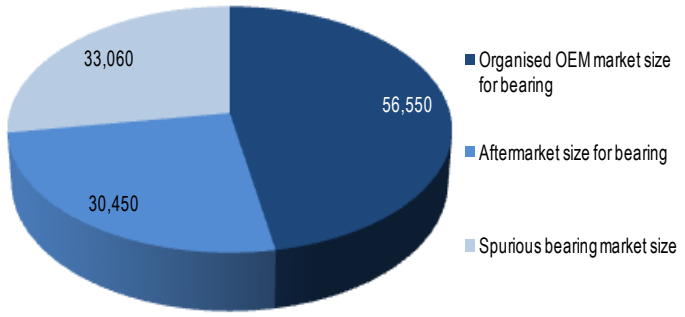
h) Spurious bearing market is estimated at more than one-third the size of organised market

Inferior quality bearing imports pose a major challenge to domestic bearing customers as well as producers. Most of these low quality imported bearings are sold in price-conscious replacement market as spurious bearings by repackaging as original products from leading manufacturers. This is done by taking advantage of the demand-supply gap, lower price-point of these products and lack of expertise on the part of users to differentiate between original and spurious products. Moreover, bearings of indigenous manufacturers with no technology tie-up with any global player (local manufacturers) with somewhat better quality are also utilised for repackaging and get sold as spurious products.

Out of more than 300 local manufacturers, around 50 have a reasonable standing in after-market on account of quality of the product. Moreover, these manufacturers also offer guarantee and warranty like leading global players. Sales of counterfeit products are estimated at around 38% of total organised market. Ball bearings are most widely counterfeited products and alone constitute 70% of total counterfeit bearing market. With accelerated reduction in customs duty over the years, this activity acquired significant dimension.

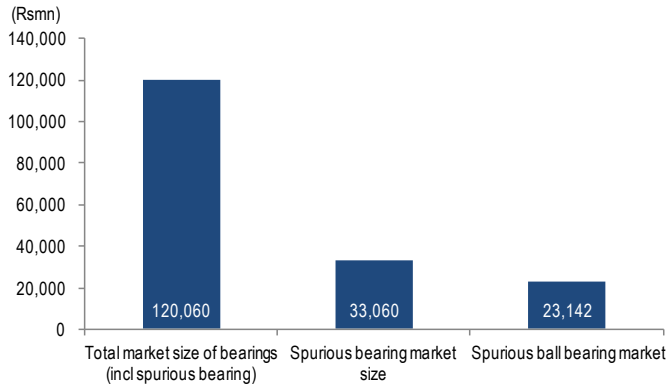
Chinese bearings are cheaper than Indian bearings by up to 40%, depending on the type of bearing. Chinese companies are not giving any guarantee or warranty for their bearings. With this background, there is also need for extensive domestic standards which can be applied equally to imported bearings and prevent a surge in low quality and unsafe products.

Exhibit 27: Organised OEM, after-market and spurious market size



Source: Industry, Nirmal Bang Institutional Equities Research

Exhibit 28: Total market size of bearing (incl. spurious bearing)



Source: Industry, Nirmal Bang Institutional Equities Research

i) After-market structure of bearing industry is akin to FMCG distribution network

India's bearing sector is equally divided between automotive and industrial segments. Except for NRB Bearings, all other leading companies are present in both segments. Besides OEMs, these players have a significant presence in after-market segment through a vast network of dealers, distributors and retailers. Distribution network plays a very significant role in capturing market share in replacement market. SKF India has the largest network of around 250 distributors and more than 20,000 retailers on automotive side of the business. On the industrial front, it has a network cpmprising 80 distribution outlets and more than 2,200 retailers for industrial bearings. Besides this, FAG, Timken India and NRB Bearings have 200, 100 and 150 distributors, respectively. Strong presence in after-market segment mitigates the risk arising out of cyclicality in OEM business and helps in protecting margins in the capital-intensive industry.

The general margin range for distribution channel in after-market segment is 20% to 35%. The manufacturers are giving discounts and offering schemes to distributors and retailers. Retailers are further passing on a part of the discount to end-users. In case of critical applications, automobile or machinery manufacturers do not compromise on quality of bearings and go for high quality names, but in peripheral activities they go for low-priced bearings.

Exhibit 29: Distribution network of leading players

Company	No of distributors	No of dealers	No of SKUs
SKF India	250	20,000	80
Timken India	100	NA	NA
FAG	200	NA	NA
NRB Bearings	150	NA	3,000
NEI	NA	NA	525

Source: Company, Nirmal Bang Institutional Equities Research

j) Difference in quality of local and multinational players explains the price difference

Local manufacturers mainly serve the after-market segment and have almost no presence in OEM segment. The largest after-market segment is automotive. Low price is the first point of attraction for a customer to buy such products manufactured by local manufacturers. The difference in prices of products of a local manufacturer and a multinational company is in the range of 2.5x-4.0x (suppose a local manufacturer's selling price of a bearing is Rs100, then a multinational company's price may be Rs250-Rs400). However, it is argued that the quality difference between the two is not more than 2x. Customers who are not very quality conscious go for such bearings or Chinese bearings. Customers expect a huge price discount from local manufacturers compared to prices charged by multinational companies.

The main reasons for price difference are: a) Quality perception about products manufactured by local manufacturers with no technology tie-up, and b) Expectation of a substantial price discount as the user or buyer is fully aware of the cost structure of indigenous producers.

Local manufacturers have no presence in automotive OEM space and a very small presence in industrial OEM segment. Lack of technology edge and innovation are the main reasons. However, in automotive replacement market local manufacturers have been able to garner market share on account of the focus on small-sized and low-end mass consuming products, price-sensitive nature of after-market segment, large potential to sell counterfeit products and extending warranty/guarantee on the lines of multinational players.

For the first three years, every manufacturer's product in industrial bearings segment looks the same. After three years it starts making noise and there is a high rate of failure. Hence, there is a growing trend in after-market segment towards reducing total cost of ownership (TCO). Customers are also looking for very short lead times which require a large number of stock-keeping units (SKUs). It needs huge investment which is out of reach for a majority of 300 odd local manufacturers of bearings. Moreover, local manufacturers are fighting with quality perception and customers are not ready to pay a deserving price. Therefore, local manufacturers are restricting themselves to small and medium-sized bearings.

k) Recent entry of new multinational players increased competition in automotive segment

The industry has witnessed the advent of Japanese bearing manufacturers (NSK in 2008 and NTN in 2005). Both these companies have plants in Kancheepuram near Chennai for making automotive bearings in India. As per latest estimates, the size of organised bearing market is Rs85bn-Rs90bn and top five manufacturers (SKF India, NEI, FAG, Timken India, NRB Bearings) cumulatively have around 82% market share in revenue terms. These players are well entrenched in automotive OEMs on account of their technology and ability to associate with OEMs right from the product development stage. Till some time ago, these players used to compete with each other. However, with the strong presence of Japanese automotive OEMs in India, new Japanese bearing manufacturers are getting some foothold in automotive OEM segment. However, we do not expect any major market share loss by these top players to new entrants given relatively small size of their operations currently.

We have seen no major competition emerging for existing leading multinational players in industrial bearings in OEM segment, mainly on account of low volume of industrial bearings, large investment requirement and long homologation period before commercialising the product.

Exhibit 30: Entry of new global players is mainly in automotive segment

Company	Plant location	Commencement of operations	Targeted segment
NTN Bearings India	Kancheepuram, Tamil Nadu	February, 2005	Automotive
Nachi KG Technology	Neemrana, Rajsthan	July, 2013	Automotive
NSK-ABC	Kancheepuram, Tamil Nadu	February, 2008	Automotive
JTEKT-Koyo	Bawal, Haryana	November, 2012	Automotive

Source: Industry, Nirmal Bang Institutional Equities Research

l) Industrial and automotive bearings are like chalk and cheese

Industrial bearings are different in many respects as compared to automotive bearings. Industrial bearings have a low volume, customised nature, higher investment requirement, long homologation period, different manufacturing process, supply chain etc. These are almost independent operations. Automotive bearings, on the other hand, are standardised, high volume, having a shorter homologation period and driven by OEM segment.

Homologation period is different for different sectors or industries. For example, in wind energy sector it is 18 months and in case of railways it is 36 months. Therefore, it depends on: a) Application of the bearing, b) Industry standards, c) Consequential cost of failure of a product using that type of industrial bearing, and d) Capacity of the bearing to operate reliably under extreme operating conditions. Therefore, it's different stroke for different sectors.

The scope for customisation of bearings is higher in industrial bearings than automotive bearings and as a result margins tend to be higher in industrial bearings rather than automotive bearings on a global level.

In after-market segment also, industrial bearings fetch a higher margin as against commodity automotive bearings on account of customised nature of industrial bearings and low volume. Also, the level of expertise required for identifying a quality industrial bearing is higher than what is required for an automotive bearing. Hence, many a times the motive for recommending automotive segment bearing in after-market segment may be the profit and not the quality.

m) Indian listed multinational players have also unlisted subsidiaries of parents

Leading multinational players listed in India like SKF India, Timken India and FAG have their parent's presence through unlisted wholly-owned subsidiaries. SKF Technology India Private Limited, a wholly-owned subsidiary of the parent in India since 2010, is dedicated to manufacture large-sized industrial bearings for wind energy generators, railways and other industries. INA Bearings India Private Limited, a subsidiary of FAG (Schaeffler AG), has a manufacturing facility specialising in rolling bearings and precision parts catering to automotive and industrial sectors. Timken India Manufacturing Private Limited, 100% owned by Timken Co based in the US, has an export-oriented manufacturing facility in Chennai since 2008.

Is this a risk to the business of listed entity and in turn to its minority shareholders?

The risks involved in manufacturing some products (which the unlisted subsidiary makes) in the listed entity is more strenuous to its financial health and are unjustified. This is because most of the products made by unlisted subsidiaries are for industrial segment which have low volume, large size, customized nature and are highly capital-intensive in nature with a long homologation period. This poses risk to the financial health of listed entity and in turn to their minority shareholders, if these products are manufactured in the listed entity. However, with the intention of not depriving the listed entity's right and also to avoid conflict of interest or cannibalisation of market share, these products are sold only through the listed entity in India. The listed entity follows transfer pricing regulations while buying from unlisted entities.

Factors that determine investment decisions

Industrial bearing is a different cup of tea as compared to automotive bearing. Industrial bearings have totally different manufacturing process, supply chain etc. They are almost independent operations. Therefore, the investment decision is based on where it is most logical to set up the plant. Many bearings cannot be manufactured in India because tooling costs are prohibitive and the volume is not enough to justify the investment. Moreover, particularly in case of industrial bearings, a company has to build the infrastructure first and then get a sample batch of bearings manufactured in a long-duration homologation process. The stage of commercial production is reached only after the product gets approved by the client. In after-market segment, the state of market demand is also an additional influencing factor. Therefore, considering all this it takes almost seven to eight years for the industrial bearing unit to be in the black. All these factors need to be considered before deciding to make investment.

Exhibit 31: Details of the unlisted group entity of the listed player

Listed company	Wholly owned subsidiary of parent	Location	Commencement year of operations	Targeted segment
SKF India	SKF Technologies India Pvt. Ltd.	Ahamdabad	2010	Large size industrial bearings
Timken India	Timken India Manufacturing Pvt Ltd	Chennai	2008	Large size industrial and off highway bearings
FAG Bearings India	INA Bearings India Pvt. Ltd.	Pune	1998	Automotive bearings - Needle roller bearings

Source: Company, Nirmal Bang Institutional Equities Research

n) For the listed players, imports primarily comprise of industrial bearings while exports mostly comprise of automotive bearings

Industrial bearings which are of high value, have low volume and require huge investments with a long homologation period are generally imported by multinational companies like SKF India, FAG and Timken India from either their parent or group companies overseas. However, all of them have set up manufacturing facilities for industrial bearings in India apart from listed entities. Hence, the outsourcing of industrial bearings, which forms a part of traded goods for revenue classification, forms a substantial portion of the top-line for listed entities. Besides finished industrial bearings, listed entities import a lot of raw materials which include steel, steel tubes, rubber, plastics, cages, rolling elements, shafts, ball-screws, lubricants, monitoring equipment etc. As a result of import of industrial bearings, their business model is asset light and the cost structure is substantially variable, which helps during a downturn. All these multinational companies have revenue from exports as well. They mainly export automotive bearings either to their parent or group companies, primarily in Europe and North America.

Exhibit 32: Imports and exports as % of revenue

Particulars	Raw material import as % revenue	Traded goods as % of revenue	Export as % revenue	Total imports as % revenue
SKF India	6	41	8	32
Timken India	8	36	36	23
NRB Bearings	14	0	23	14
FAG	15	31	18	36

Source: Company, Nirmal Bang Institutional Equities Research

o) Long homologation period provides entry barriers for a new entrant

Homologation of bearings is for both automotive and industrial bearings. Industrial bearings are not easy to homologate and take a longer time compared to automotive bearings. Homologation period could be between 12 months to 36 months. Automotive bearings take around 6 months to12 months to homologate while wind energy sector takes 18 months and railways take 36 months. This is on account of long duration staged approval process wherein customers like to conduct various rigorous tests on the product for certain duration and on a certain number of batches before giving approval to start commercial production.

Exhibit 33: Industry wise homologation period

Segment	Homologation period
Railways	36 months
Wind Energy	18 months
Automotive	6-12 months

Source: Industry, Nirmal Bang Institutional Equities Research

p) Royalty payment for use of technology developed by parents

All leading multinational bearing manufacturers get access to technology of the parent and have to pay royalty for it. The royalty rates keep on changing. The royalty payment for most of the listed multinational bearing companies is in Indian rupees (INR) and based on revenue which is also in INR. Hence, there is no element of forex risk involved.

Exhibit 34: Royalty, trademark fee and other charges as % of revenue

Royalty and trademark fee as a % of revenue	CY11/ FY12	CY12/ FY13	CY13/ FY14	CY14/ FY15
SKF India	0.6	2.1	2.8	2.8
Timken India	4.0	4.0	4.1	3.1
FAG	1.6	1.6	1.6	1.6

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 35: Royalty, trademark fee and other charges YoY growth

Royalty and trademark fee YoY growth (%)	CY11/ FY12	CY12/ FY13	CY13/ FY14	CY14/ FY15
SKF India	22.4	233.3	35.1	5.4
Timken India	85.3	(16.0)	5.1	(0.2)
FAG	14.0	16.0	(7.3)	16.0

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 36: Technology partners of Indian bearing players

Indian company	Technology partner	Product
SKF India	SKF AB, Sweden	Ball/roller bearings
Timken India	Timken Co, USA	Roller bearings
FAG	Schaeffler Technologies AG, Germany	Ball/roller bearings
NRB Bearings	NADELLA, France and INA Germany	Needle roller bearing
ABC	NSK, Japan	Ball/roller bearings
NEI	NTN, Japan	Ball/roller bearings
Bimetal Bearings	Clevite Inc, USA and Repco, Australia	Engine bearings

Source: Company, Nirmal Bang Institutional Equities Research

q) Metal bearings will not be replaced by non-metal bearings

According to industry experts, the most important thing which is going to influence the bearing industry in future will be material science. There are a few industries like food & beverage and abrasives where non-metal bearings - ceramic or plastic bearings - are used. In the food and beverage industry, plastic bearings are used to tackle the corrosion problem. Moreover, food grade grease and seals are also used. Ceramic bearings are used in an abrasive environment, but in no way non-metal bearings will replace metal bearings.

Near-term to medium-term outlook appears dim for the bearing companies

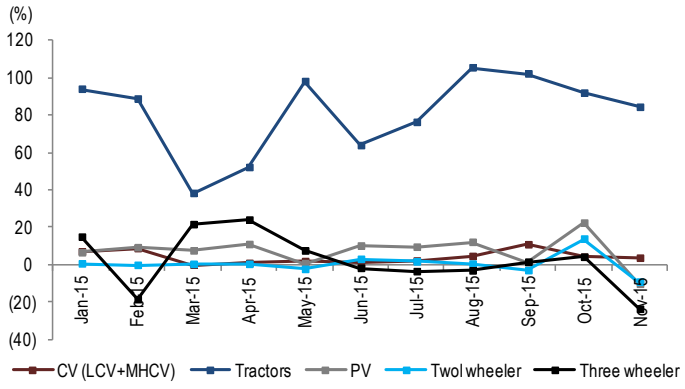
Our recent interaction with various industry players and experts suggest that there are some near-term headwinds as far as demand is concerned owing to slow recovery in the economy. There are many sectors which have shown negative growth in the recent past. However, there are some levers in place which are driving growth and improved sequentially since the past few months. A sector like railways and some sub-segments in automotive sector have been doing well. In automotive space, medium and heavy commercial vehicle (MHCV) and passenger vehicle (PV) segments have done well while light commercial vehicle (LCV), tractor and two-wheeler segments reported negative growth. The railway modernisation programme which lays emphasis on safety, increasing the length of fast tracks or corridors, and on increasing the or requirement for wagons and high-speed passenger coaches augurs well for bearing industry. Cement industry is steady but coal, agriculture and steel sectors are weak even from bearing industry's perspective. We have been given to understand that some demand has been witnessed from forklift manufacturers for bearings. The freight movement is not very high to conclude that the recent uptick in commercial vehicle (CV) sales will sustain. However, the replacement demand from fleet operators is there to some extent. No green shoots or definite signs of revival have been witnessed yet. However, there is consensus that things will not worsen going forward. Liquidity crunch in the system and lower capacity utilisation may act spoilsport.

Exhibit 37: Macroeconomic parameters in the recent past

Particulars	*GDP Growth (%)*	*IIP growth (%)*
July-Sept 2014	*8.4*	*1.3*
Oct-Dec 2014	*6.6*	*2.0*
Jan-March 2015	*7.5*	*3.3*
April-June 2015	*7.0*	*3.2*
July-Sept 2015	*7.4*	*4.8*

Source: CSO, Nirmal Bang Institutional Equities Research

Exhibit 38: YoY growth across automotive sub-segments



Source: Society of Indian Automobile Manufacturers or SIAM , *Nirmal Bang Institutional Equities Research*

We expect bearing industry to grow 9%-10% over FY15-FY18E

Over the past nine years, YoY growth of the organised bearing industry in India and YoY aggregate revenue growth of leading six players (SKF India, Timken India, FAG, NRB Bearings, ABC, MENON) implies a GDP multiplier of 1.2x and 1.9x, respectively. The industry clocked a CAGR of ~9% and the aggregate revenue of leading players posted a CAGR of 13% over the same period. We expect India's GDP to grow 7.7% on an average over FY15-FY18E, which implies the industry may post a CAGR of 9%-10% over the same period.

The policy initiatives in past few quarters are likely to augur well for bearing industry's revenue growth in coming quarters and includes: A) Auction of coal mines, B) Efforts to revive stalled infrastructure projects in road, power, port sectors etc., C) Reinstatement of accelerated depreciation in wind energy segment, D) Implementation of advance emission norms and ABS in automotive sector, E) Modernisation and expansion of railways, DFC project and setting up of metro rail network in more than 20 cities across India, F) Falling interest rates, and G) Recently announced average pay hike of 23% for government employees by Seventh Pay Commission.

Exhibit 39: Correlation and multiplier between GDP growth, bearing industry growth and aggregate revenue growth of leading bearing players

Particulars	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
A) GDP YoY growth at Factor cost (%)	*4.3*	*5.8*	*3.8*	*8.5*	*7.6*	*9.5*	*9.6*	*9.3*	*6.7*	*8.4*	*8.4*	*6.9*	*4.5*	*4.7*
B) Bearing Industry YoY growth (%)	-	-	-	-	-	*31.7*	*5.6*	*5.3*	*1.7*	*8.2*	*6.1*	*7.1*	*4.0*	*11.5*
*C) Large 6 players aggregate revenue YoY growth * (%)*	-	-	-	-	*24.3*	*42.0*	*12.5*	*5.4*	*0.4*	*33.2*	*24.5*	*(4.0)*	*0.9*	*13.0*
Correlation (A:B)	0.30	-	-	-	-	-	-	-	-	-	-	-	-	-
Correlation (A:C)	0.50	-	-	-	-	-	-	-	-	-	-	-	-	-
For the bearing industry														
Multiplier (x)	-	-	-	-	-	3.34	0.58	0.57	0.25	0.98	0.72	1.04	0.89	2.45
Average multiplier (x)	1.20	-	-	-	-	-	-	-	-	-	-	-	-	-
For the large 6 bearing co's revenue YoY growth*														
Multiplier (x)					3.2	4.4	1.3	0.6	0.1	4.0	2.9	(0.6)	0.2	2.8
Average multiplier (x)	1.88	-	-	-	-	-	-	-	-	-	-	-	-	-
Average GDP growth over FY15-FY18E (%)	*7.7*	-	-	-	-	-	-	-	-	-	-	-	-	-
Average IIP growth rate over FY15-FY18E (%)	*5.8*	-	-	-	-	-	-	-	-	-	-	-	-	-
Hence, estimated bearing industry growth (%)	***9.3***	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: *=Aggregate net revenue of SKF India, Timken India, FAG, NRB Bearings, ABC, MENON

Source: Industry, CSO, Nirmal Bang Institutional Equities Research

Moreover, following factors are also directed towards long-term growth:

a) Polarisation of industry towards big players to continue

The collective revenue market share of five leading players moved from 61% in FY06/CY05 to 82%in FY15/CY14. Each individual player in the pool gained market share over the same period. We believe this will continue.

Exhibit 40: Market share of leading players improved over the past few years

Company	*Market share FY06/CY05 (%)*	Company	*Market share FY15 (%)*
SKF India	*22*	SKF India	*28*
FAG	*11*	FAG	*20*
NEI	*13*	NEI	*17*
Timken India	*8*	Timken India	*10*
NRB Bearings	*7*	NRB Bearings	*7*
Total	***61***		***82***
Market size (Rsmn)	**41,000**		***87,000***

Source: Industry, Nirmal Bang Institutional Equities Research

b) Technology takes a front seat which will provide market share expansion

Bearings are also getting more sophisticated in terms of technology. We have seen the evolution of bearing technology from a normal ball bearing to latest sensor bearing. Improvement in technology and new applications like anti-lock braking system or ABS, StopGo, Hub Grid solutions etc. have clearly put leading multinational players in an advantageous position. This augurs well in expanding their collective and individual market shares.

c) Indigenisation or localization of production of industrial bearings leads to time and cost savings

Large investment-driven industrial bearings, which are highly customised in nature, are mostly imported. All the leading players have increased indigenisation of industrial bearings,whether they are in the listed space or as unlisted entity of the parent. This offers dual advantages like reduction in delivery period and allied cost savings on forex front.

d) Services segment potential is estimated at 10x the size of organised bearing market

Large clients of industrial bearings have realised the importance of reducing life cycle cost through regular maintenance. This has opened up new revenue source for bearing manufacturers. Bearing companies have started selling various allied services like refurbishment, maintenance-repair-overhaul or MRO, lubrication etc, across various user industries. The market size for all these allied services has been estimated at 10x the size of organised bearing market. SKF India has taken the lead in this segment by launching five different services. Timken India has set up gearbox refurbishment facility at Raipur. FAG has started focusing on reducing life cycle cost by providing solutions for preventive maintenance.

Exhibit 41: Other services offered

Particulars	SKF India	Timken India	FAG
Other services offered	Solutions encompassing, seals, mechatronics lubrication system, technical support, life cycle management, repairs, refurbishment & maintenance services, condition monitoring, engineering consultancy	MILLTEC services for 24/7 management of roll shops in steel and aluminum mills, industrial gearboxes and bearings refurbishment, providing lubrication solutions like seals, grease, lubricants etc.	Replacement of part with service solutions, lubrication solutions, bearings repairs and refurbishment

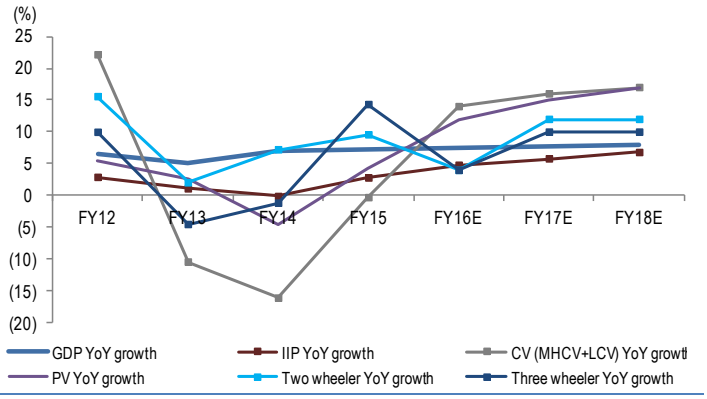
Source: Company, Nirmal Bang Institutional Equities Research

e) Recent policy decisions expected to provide impetus for long-term growth of bearing industry

The policy initiatives in past few quarters (mentioned earlier) are likely to augur well for the bearing industry's revenue growth going forward. Moreover, we believe the lower car penetration in India, at 18 cars per 1,000 people, and rising per capita income will drive automobile market penetration level going forward. We expect industrial capex to revive on account of recovery in automobile sales, new capacity addition and peaking up of current capacity utilisation.

Exhibit 42: Forecast of macroeconomic parameters and automotive volume

Particulars (%)	FY12	FY13	FY14	FY15	FY16E	FY17E	FY18E
GDP YoY growth	6.6	5.1	6.9	7.3	7.5	7.7	7.9
IIP YoY growth	2.9	1.1	(0.1)	2.8	4.8	5.8	6.8
CV (MHCV+LCV) YoY growth	22.1	(10.4)	(16.0)	(0.3)	14.0	16.0	17.0
PV YoY growth	5.5	2.7	(4.4)	4.3	12.0	15.0	17.0
Two wheeler YoY growth	15.6	2.1	7.2	9.6	4.0	12.0	12.0
Three wheeler YoY growth	10.0	(4.5)	(1.1)	14.3	4.0	10.0	10.0



Source: SIAM, *CSO, Nirmal Bang Institutional Equities Research*

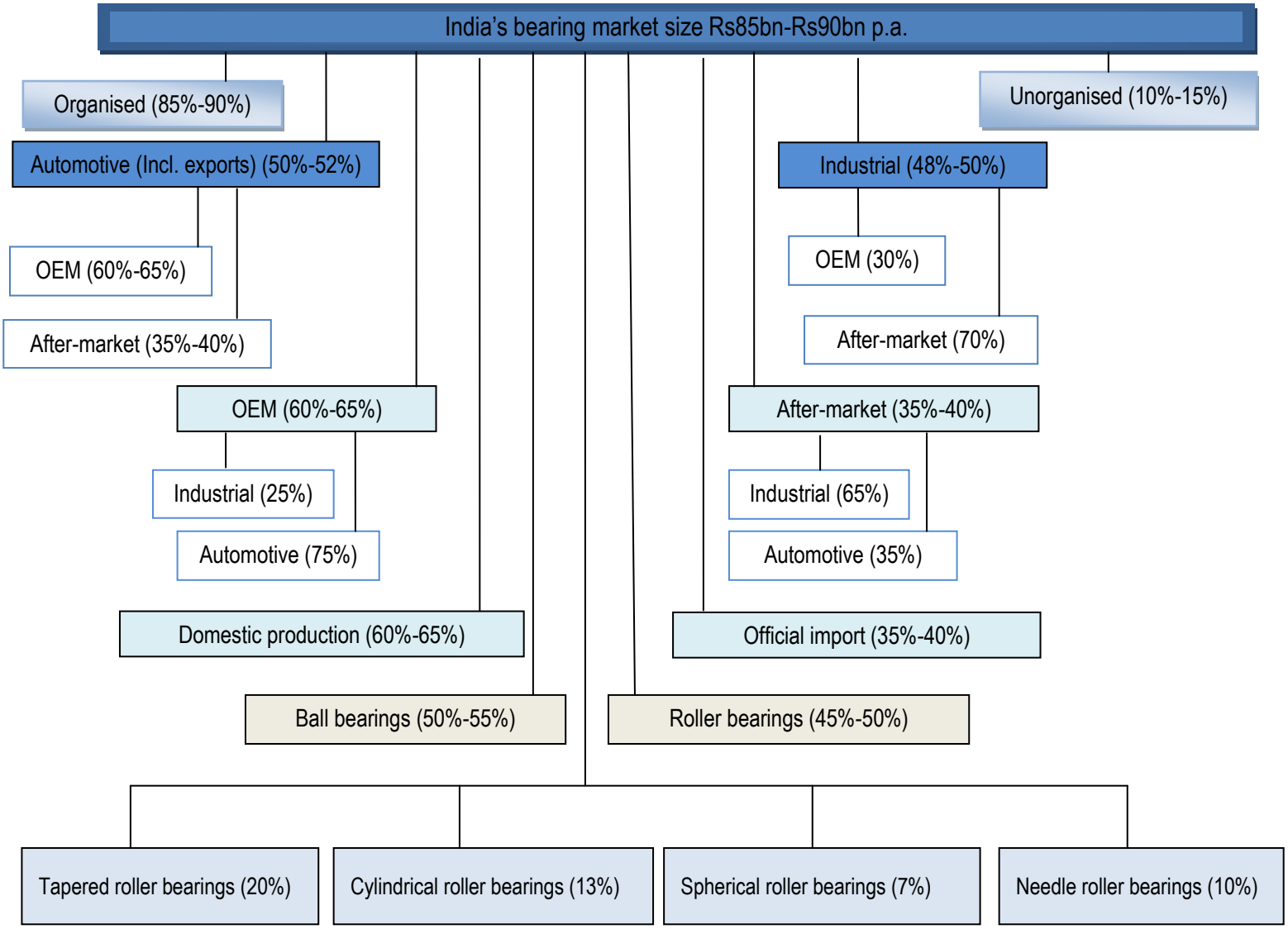
f) Railways, metro rail and defence sectors are expected to drive growth going forward

Railways is the second largest sector after automotive. The market size is Rs800mn-Rs1,000mn per annum. With the focus on improving safety in trains, modernisation and expansion of railway rolling stock/locomotives, rise in the number of fast trains and track kilometers, introduction of high-speed trains, and DFC (Dedicated Freight Corridor) project along with expansion of metro train network to a number of cities are all expected to drive demand for bearings from railways by a double-digit CAGR in the next few years. Annual DFC project market is estimated at Rs2bn-Rs5bn by FY19, as per various estimates. Metro rail segment offers a Rs400mn opportunity currently and likely to expand given more cities to have the metro network in coming years. The huge focus on indigenisation of defence equipment is expected to further expand the opportunities for bearing manufacturers.

g) Each player has carved out a niche for itself

Each listed company among top five largest bearing players is market leader in a particular type of bearing. This is likely to continue going forward as well. SKF India is the leader in deep groove ball bearings, FAG is the leader in roller bearings – spherical and cylindrical, Timken India is the largest player in tapered roller bearings (TRBs) while NRB Bearings is the leader in needle roller bearings (NRBs). Technological competence, either through parent or joint venture, and investment in innovation and manufacturing capability will make sure that the ranking will not alter significantly and provide a strong opportunity for growth.

Exhibit 43: India's bearing market likely to touch Rs135bn by FY20E and to Rs200bn by FY25E from Rs85bn-Rs90bn currently



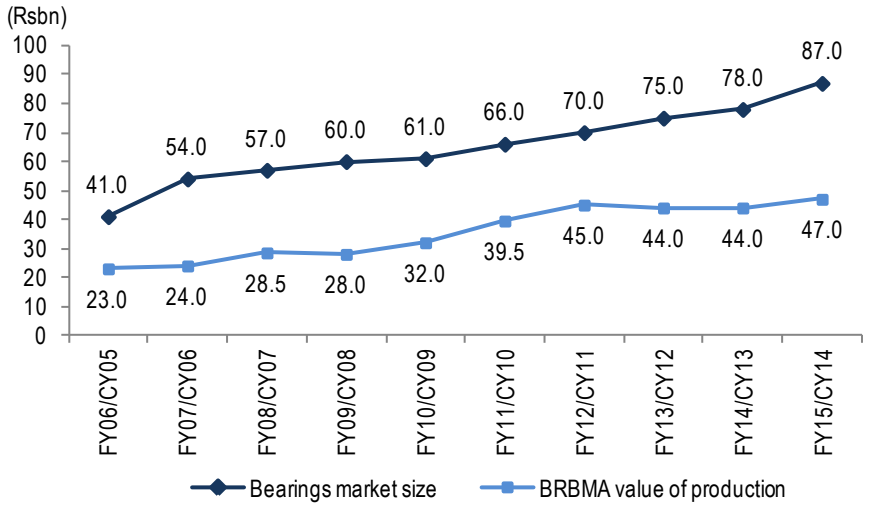
Source: Industry, Nirmal Bang Institutional Equities Research

Exhibit 44: Organised market size and movement

Particulars (Rsbn)	FY06/ CY05	FY07/ CY06	FY08/ CY07	FY09/ CY08	FY10 /CY09	FY11/ CY10	FY12/ CY11	FY13/ CY12	FY14/ CY13	FY15/ CY14	*9 YR CAGR*	*5 YR CAGR*
Bearings market size	41	54	57	60	61	66	70	75	78	87	***8.7%***	***7.4%***
YoY growth (%)	-	*31.7*	*5.6*	*5.3*	*1.7*	*8.2*	*6.1*	*7.1*	*4.0*	*11.5*	-	-
BRBMA value of production	23	24	28.5	28	32	39.5	45	44	44	47	***8.3%***	***8.0%***
YoY growth (%)	-	*4.3*	*18.8*	*-1.8*	*14.3*	*23.4*	*13.9*	*(2.2)*	*0.0*	*6.8*	-	-

Source: Industry, BRBMA or Ball and Roller Bearing Manufacturers Association

Exhibit 45: India's organised bearing market clocked a CAGR of 8.7% over FY06-FY15



Source: Industry, BRBMA

Two large bearing consuming sectors – Automotive and Industrial: The automotive segment comprising two-wheelers, cars, commercial vehicles and tractors is catered to mainly by tapered roller bearings, deep groove ball bearings and hub bearing units. The industrial segment includes a wide range of applications in demanding and challenging operating environments in segments such as off-highway vehicles, industrial drives, energy, railways, metal, mining, pulp & paper and cement sectors, to name a few, and are catered to by spherical roller bearings, cylindrical roller bearings, slewing bearings, etc.

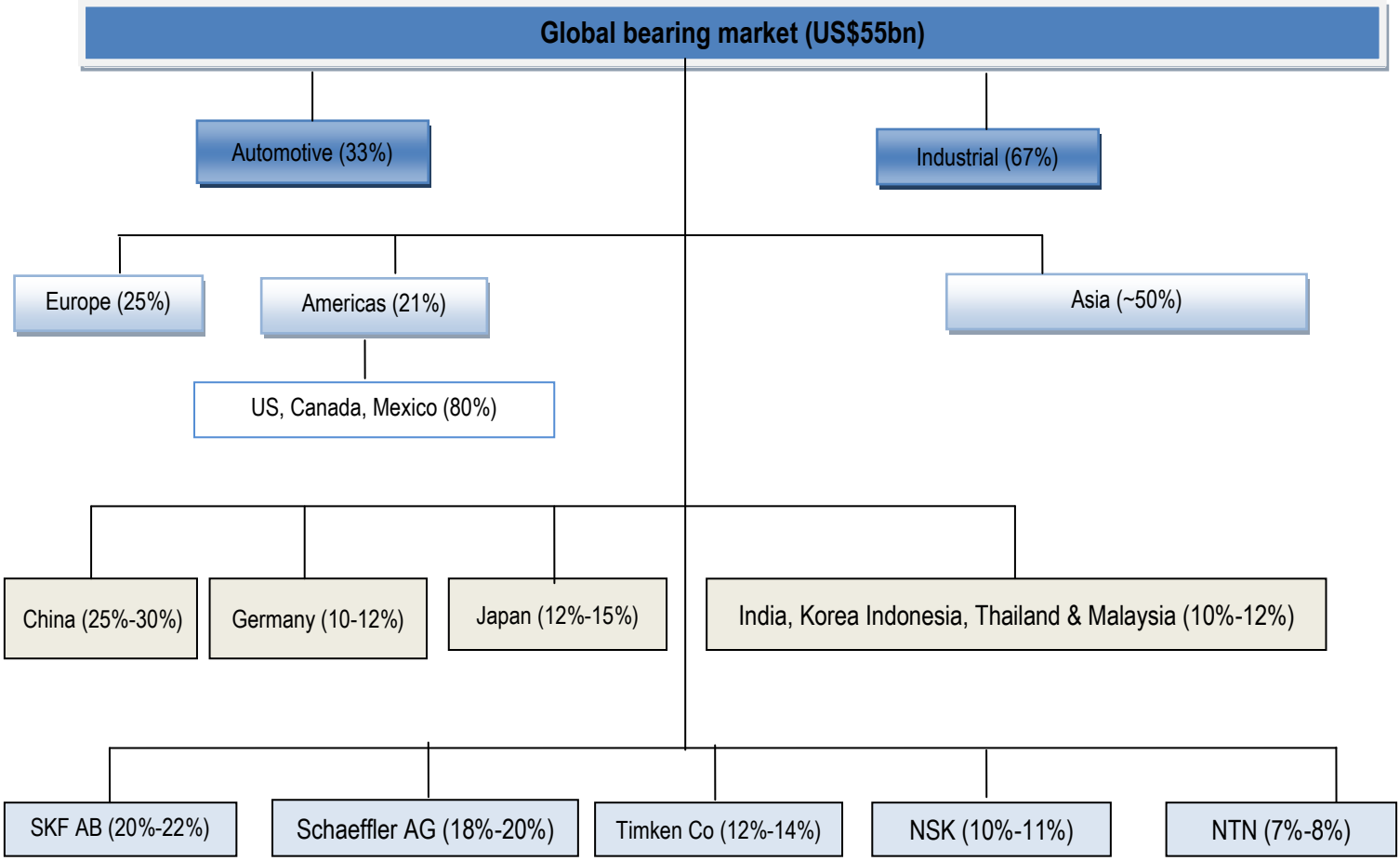
Bearing industry in India can be divided into two segments - organised and unorganised : The organised segment primarily caters to OEMs which are predominantly in automotive, railways and other industrial sectors. The unorganised segment represents small-scale manufacturers and suppliers of spurious bearings. It is dominated by after-market and continues to serve the very low-end market as well as it forms the core of counterfeit products. With the renewed focus on quality and reliability, after-market segment is increasingly turning to the organised sector

Factors affecting growth drivers of bearing industry: The prospects of bearing industry are directly linked to the performance of two key sectors viz., automotive and infrastructure. The size of bearing market is also dependent on equipment population, frequency of maintenance, etc. Demand for bearings is broadly classified into two parts – primary or OEM demand and secondary or after-market demand. Primary demand largely depends on growth of OEMs or incremental capacity addition in the economy while secondary demand depends on availability of spare capacity and current capacity utilisation. The latest survey by the Reserve Bank of India or RBI indicates that overall capacity utilisation in the Indian economy is 70%. It has stagnated since the past few quarters. Over the medium term, RBI's OBICUS survey indicates the decline in capacity utilisation form 82%in FY11 to 75% in FY15.

Large number of local players: There are more than 300 bearing manufacturers in India. Out of this, nearly 50 manufacturers offer a quality which is better than the rest of the manufacturers and close to that of leading manufacturers. These manufacturers remain active in after-market - in automotive as well as industrial sectors.

Bearing imports from China have been consistently on the rise and comprise more than 40% of total imports currently. These imported bearings are aggressively priced, leading to pressure on market prices, especially for small and standard range of bearings in after-market segment.

Exhibit 46: India's bearing market accounts for less than 3% of the world's bearing market



Source: Industry, Nirmal Bang Institutional Equities Research

The Chinese bearing market, which remains the largest among emerging markets, is very fragmented, with the main international bearing companies accounting for about one-third of the market while the other two-thirds comprise a host of local manufacturers. Some of the largest entities include: Wafangdian (ZWZ), Luoyang (LYC), Harbin (HRB), Zhejiang Tianma (TMB), Wanxiang Qianchao, and C&U. Industry experts estimates that top six global bearing manufacturers represent about 60% of global rolling bearing market while the group of Chinese bearing companies, including small and larger ones, represent less than 20% with more than 80% of their sales in Asia, less than 10% in Europe and below 7% in Americas. The remaining 20% of Chinese bearing companies include many small regional competitors.

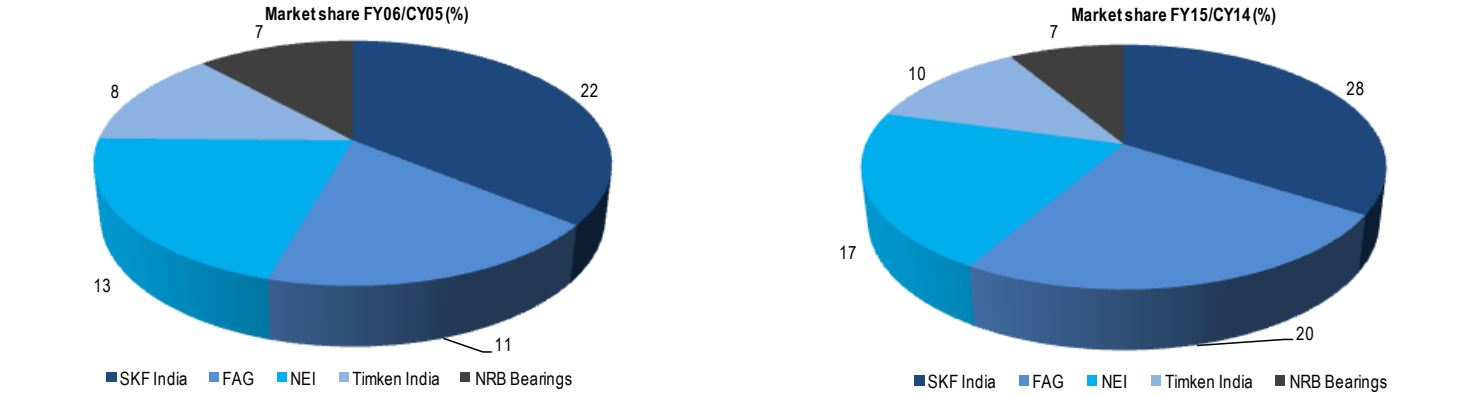
India's bearing industry witnessed a few structural changes in past few years

Exhibit 47: Market share of leading players improved over the past few years

Company	*Market share FY06/CY05 (%)*	Company	*Market share FY15 (%)*
SKF India	*22*	SKF India	*28*
FAG	*11*	FAG	*20*
NEI	*13*	NEI	*17*
Timken India	*8*	Timken India	*10*
NRB Bearings	*7*	NRB Bearings	*7*
Total	***61***		***82***
Market size (Rsmn)	**41,000**		***87,000***

Source: Industry, Nirmal Bang Institutional Equities Research

Exhibit 48: Market share movement of leading players over a decade



Source: Industry, Nirmal Bang Institutional Equities Research

Exhibit 49: Revenue growth of leading players was higher than bearing market size growth

Gross Revenue (Rsmn)	FY06/CY05	FY15/CY14	*CAGR (%)*
SKF India	8,975	25,000	*12.1*
FAG	4,627	17,320	*15.8*
NEI	5,212	14,973	*12.4*
Timken India	3,252	9,240	*12.3*
NRB Bearings	2,933	6,930	*10.0*
Market size (Rsmn)	**41,000**	**87,000**	***8.7***

Source: Company, Industry, Nirmal Bang Institutional Equities Research

1) The size of the organised market rose from Rs41bnin FY06 to Rs87bn in FY15, entailing a CAGR of 8.7%. However, all leading players posted a higher CAGR than industry CAGR, indicating market share gains for these players.

2) FAG recorded the highest CAGR of ~16% and NRB Bearings posted the lowest CAGR of 10% among top five players.

3) The largest expansion in market share of 860bps was achieved by FAG and the lowest by NRB Bearings, of 81bps.

4) The ranking in terms of market share has not changed much and SKF India maintained its leadership position in Indian bearing market over the past decade.

5) This confirms the view that the share of organised segment has been on the rise.

Few more changes observed over past few years which augurs well for bearing industry

- In 1970s, India started focusing on indigenisation. In 1980s, India started opening up its economy. In 1990s, reforms accentuated and foreign competition started kicking in. Urban demand started thriving because of personal mobility aspirations in 1990s and rural demand rose because of higher automation in farm sector. In 2000s, various new global bearing players entered the fast-growing Indian market. Also, almost all existing domestic players (Indian as well as MNCs) were aggressively adding new capacity. Over the past few years, many Japanese bearing manufacturers started manufacturing operations in India, primarily for automotive segment and thus increased the competitive landscape.
- Free trade agreements (FTAs) have provided opportunities to generate larger volume from exports. Similarly, lowering of tariff rates in India has given a boost to import of cars and their components.
- Global vehicle manufacturers are shifting their production facilities to India, especially in small car segment. All major domestic two-wheeler manufacturers have expanded production capacity.
- India, till recently focused on small and medium diameter range bearings, was importing practically every industrial bearing. But now players like SKF India, FAG and Timken India have set up manufacturing capacity for the same and have now included large-sized bearings in their manufacturing plan. Therefore, the share of India-made industrial bearings is on the rise currently.
- The bearings are also getting more sophisticated. The conventional solution featuring two individual bearings has been replaced with a compact double row angular contact bearing with integrated seals. That was the evolution of first generation wheel bearings. Other wheel components such as knuckles and hub were then integrated with bearings, leading to development of second generation bearings. Now third generation bearings are in use. These bearings have integrated flanges, built-in ABS sensors with integration of magnetic encoder in front wheel bearing, effective sealing and facilitate optimised mounting that eliminate adverse influences due to manual errors. It offer significant reduction in weight along with providing high-quality signal generation and transmission and thereby contributes to reduction in fuel usage and emission.
- Now clients want more productivity, lower energy consumption, vibration, weight, noise and emission.
- With the renewed focus on quality and reliability, after-market segment is increasingly turning to the organised segment in general and to large multinational companies in particular, as reflected by market share gains of these companies over the past decade.
- Customers are asking for more competitiveness and responsiveness from bearing industry, which requires these companies to regionalise production bases closer to customers.
- Further, with product liability and safety issues getting more stringent, customers are more demanding.
- The level of robotics and automation in bearing manufacturing has increased, which resulted in reduced quality inconsistency and thereby lowered the rejection rate.
- Clients have started asking for design and application engineering knowledge and assistance. In many applications, bearing can be a limiting factor in increasing the power density of equipment and also one of the first components to get damaged. Hence, working with customers to help them make optimum design choices is becoming an important customer expectation now.
- OEMs have realised the importance of quality bearing supplies. Hence, they may squeeze bearing companies for a year or two, but then they won't get a reliable supplier.
- Going forward, two things will influence bearings – a) Material science and b) Advent of new automobile technology (driverless car or car running on battery).

Competitive landscape

Exhibit 50: Each player is leader in particular type of bearing

Particulars	*Overall market share (%)*	Specialised and Leadership in	*Market share in specialised product (%)*	Nearest competitor
SKF India	*28*	Deep groove ball bearing	*45*	FAG
FAG	*20*	Spherical and Cylindrical ball bearing	*40*	SKF India, Timken India
NEI	*17*	Spherical and Cylindrical ball bearing	*20*	Timken India
Timken India	*10*	Tapered roller bearing	*45*	NEI, FAG
NRB Bearings	*7*	Needle roller bearing	*70*	INA

Source: Industry, Nirmal Bang Institutional Equities Research

Exhibit 51: Entry of new global players is mainly in automotive segment

Company	Plant location	Commencement of operations	Targeted segment
NTN Bearings India	Kancheepuram, Tamil Nadu	February, 2005	Automotive
Nachi KG Technology	Neemrana, Rajsthan	July, 2013	Automotive
NSK-ABC	Kancheepuram, Tamil Nadu	February, 2008	Automotive
JTEKT-Koyo	Bawal, Haryana	November, 2012	Automotive

Source: Industry, Nirmal Bang Institutional Equities Research

Exhibit 52: Financial performance of the sector and players in the sector

Last 3 years	Revenue CAGR	PAT CAGR	Average EBITDA margin	Average PAT margin	Average RoE	Average RoCE	Average WC days	Average Fixed asset turn
SKF India	-0.3%	-0.9%	11.6%	8.1%	15.4%	13.1%	40 days	2.4x
Timken India	4.0%	8.0%	12.3%	7.1%	15.2%	16.7%	114 days	2.9x
NRB Bearings	6.1%	2.5%	15.4%	8.5%	20.7%	13.4%	127 days	1.3x
FAG	7.6%	-4.6%	14.4%	9.7%	15.8%	14.3%	45 days	2.3x

Last 5 years	Revenue CAGR	PAT CAGR	Average EBITDA margin	Average PAT margin	Average RoE	Average RoCE	Average WC days	Average Fixed asset turn
SKF India	9.0%	17.0%	11.8%	8.3%	15.0%	15.5%	72 days	2.5x
Timken India	24.0%	20.0%	12.9%	8.4%	16.4%	16.9%	100 days	2.9x
NRB Bearings	13.4%	16.4%	18.4%	8.5%	20.7%	13.4%	127 days	1.3x
FAG	15.4%	18.5%	15.9%	10.8%	17.9%	16.5%	47 days	2.4x

CY14/FY15-CY17E/FY18E	Revenue CAGR	PAT CAGR	Average EBITDA margin	Average PAT margin	Average RoE	Average RoCE	Average WC days	Average Fixed asset turn
SKF India	9.1%	10.3%	11.5%	8.2%	14.7%	12.4%	36days	2.6x
Timken India	17.1%	16.1%	14.2%	8.3%	19.8%	21.9%	102days	3.1x
NRB Bearings	10.7%	15.7%	17.5%	8.5%	20.2%	13.6%	138 days	1.4x
FAG	12.6%	22.7%	16.8%	11.0%	16.0%	-	-	2.2x

Revenue growth %	CY11/FY12	CY12/FY13	CY13/FY14	CY14/FY15	FY16E	FY17E	FY18E
SKF India	17.0	(8.5)	2.1	6.2	19.4	(8.4)	14.3
Timken India	79.5	(17.1)	4.6	29.0	19.2	16.8	15.5
NRB Bearings	16.3	5.5	2.6	10.3	7.3	11.1	13.2
FAG	25.8	10.6	(3.1)	16.4	7.9	14.1	16.0
EBITDA margin %	**CY11/FY12**	**CY12/FY13**	**CY13/FY14**	**CY14/FY15**	**FY16E**	**FY17E**	**FY18E**
SKF India	12.2	11.6	11.5	11.7	11.1	11.6	11.6
Timken India	12.8	10.7	9.9	14.4	13.7	12.8	10.7
NRB Bearings	19.5	16.2	16.9	17.5	17.2	17.5	17.7
FAG	19.4	15.2	13.1	14.8	17.1	17.5	17.7
Gross margin %	**CY11/FY12**	**CY12/FY13**	**CY13/FY14**	**CY14/FY15**	**FY16E**	**FY17E**	**FY18E**
SKF India	35.5	35.3	36.7	37.9	37.0	37.6	37.5
Timken India	42.1	39.4	38.1	40.2	39.2	38.7	38.1
NRB Bearings	64.4	61.7	59.2	59.2	59.2	59.5	59.4
FAG	42.1	37.3	36.0	38.9			
Gross margin traded goods %	**CY11/FY12**	**CY12/FY13**	**CY13/FY14**	**CY14/FY15**	**FY16E**	**FY17E**	**FY18E**
SKF India	15.8	18.1	13.8	14.0	8.8	7.3	5.7
Timken India	4.6	12.3	11.7	23.5	23.9	24.5	23.2
NRB Bearings	NA	NA	NA	NA	NA	NA	NA
FAG	22.7	18.0	6.6	19.8			
Gross margin manufactured goods %	**CY11/FY12**	**CY12/FY13**	**CY13/FY14**	**CY14/FY15**	**FY16E**	**FY17E**	**FY18E**
SKF India	56.8	54.4	57.7	58.7	60.2	60.2	60.5
Timken India	45.6	43.5	46.3	45.8	43.9	42.8	42.3
NRB Bearings	NA	NA	NA	NA	NA	NA	NA
FAG	56.2	52.4	55.3	51.5			
PAT margin %	**CY11/FY12**	**CY12/FY13**	**CY13/FY14**	**CY14/FY15**	**FY16E**	**FY17E**	**FY18E**
SKF India	8.6	8.5	7.3	8.4	7.6	8.4	8.7
Timken India	9.7	6.4	6.2	8.7	8.0	8.2	8.5
NRB Bearings	8.8	8.1	6.4	7.9	8.0	8.8	9.1
FAG	13.4	11.0	8.7	9.4	11.0	11.5	12.1

PAT growth %	CY11/FY12	CY12/FY13	CY13/FY14	CY14/FY15	FY16E	FY17E	FY18E
SKF India	17.8	(8.8)	(12.3)	21.6	10.1	1.6	17.2
Timken India	58.0	(45.1)	1.2	80.3	9.6	19.4	19.5
NRB Bearings	(10.4)	(2.6)	(18.8)	36.4	8.5	21.4	17.6
FAG	44.8	(9.5)	(23.5)	25.5	27.2	18.7	22.3

RoE %	CY11/FY12	CY12/FY13	CY13/FY14	CY14/FY15	FY16E	FY17E	FY18E
SKF India	20.6	17.5	13.7	15.1	15.2	13.9	14.7
Timken India	23.3	13.5	12.4	19.7	19.0	19.9	20.6
NRB Bearings	20.8	20.6	17.1	20.5	19.4	20.4	20.5
FAG	24.1	19.8	13.0	14.6	16.0	16.4	17.1

RoCE %	CY11/FY12	CY12/FY13	CY13/FY14	CY14/FY15	FY16E	FY17E	FY18E
SKF India	17.2	13.8	12.9	12.7	12.9	11.6	12.4
Timken India	23.3	12.9	11.6	21.6	20.4	21.1	22.2
NRB Bearings	14.9	10.7	10.8	12.4	12.5	14.3	15.3
FAG	23.2	17.8	11.3	13.9	-	-	-

WC days	CY11/FY12	CY12/FY13	CY13/FY14	CY14/FY15	FY16E	FY17E	FY18E
SKF India	40	39	45	37	45	32	31
Timken India	74	119	114	109	99	100	100
NRB Bearings	123	132	137	142	134	137	139
FAG	47	45	41	48	-	-	-

Fixed asset turnover x	CY11/FY12	CY12/FY13	CY13/FY14	CY14/FY15	FY16E	FY17E	FY18E
SKF India	2.8	2.4	2.3	2.4	2.8	2.5	2.8
Timken India	3.7	2.8	2.7	3.2	3.2	3.0	3.1
NRB Bearings	1.3	1.3	1.3	1.3	1.3	1.4	1.5
FAG	2.8	2.7	2.1	2.2	2.2	2.2	2.3

Fixed asset turnover (adjusted) x	CY11/FY12	CY12/FY13	CY13/FY14	CY14/FY15	FY16E	FY17E	FY18E
SKF India	1.5	1.3	1.3	1.3	1.7	1.5	1.7
Timken India	3.2	2.1	1.8	2.1	2.0	1.9	1.9
NRB Bearings	NA	NA	NA	NA	NA	NA	NA
FAG	1.8	1.6	1.3	1.5			

Traded goods as % of revenue	CY11/FY12	CY12/FY13	CY13/FY14	CY14/FY15	FY16E	FY17E	FY18E
SKF India	45.0	43.1	41.2	41.6	39.9	38.5	37.7
Timken India	14.2	24.1	32.4	35.2	37.0	38.0	37.8
NRB Bearings	NA	NA	NA	NA	NA	NA	NA
FAG	32.0	31.8	30.1	28.6	-	-	-

Imported raw mat as % of total raw mat	CY11/FY12	CY12/FY13	CY13/FY14	CY14/FY15	FY16E	FY17E	FY18E
SKF India	43.4	20.7	27.5	20.3	18.0	20.0	20.0
Timken India	35.8	35.9	26.8	21.3	19.0	18.0	17.0
NRB Bearings	51.6	35.1	47.3	35.3	36.0	37.0	35.0
FAG	38.1	35.8	34.4	40.1	-	-	-

Royalty/trademark Fee YoY growth %	CY11/FY12	CY12/FY13	CY13/FY14	CY14/FY15	FY16E	FY17E	FY18E
SKF India	22.4	233.3	35.1	5.4	30.1	(9.1)	14.5
Timken India	85.3	(16.0)	5.1	(0.2)	31.6	15.1	3.6
NRB Bearings	NA	NA	NA	NA	NA	NA	NA
FAG	17.2	16.0	(7.3)	16.0	-	-	-

Royalty/trademark Fee % of revenue	CY11/FY12	CY12/FY13	CY13/FY14	CY14/FY15	FY16E	FY17E	FY18E
SKF India	0.6	2.1	2.7	2.7	2.8	2.8	2.8
Timken India	4.0	4.0	4.1	3.1	3.5	3.4	3.1
NRB Bearings	NA	NA	NA	NA	NA	NA	NA
FAG	1.6	1.6	1.6	1.6	-	-	-
Royalty/trademark Fee % of manufacturing revenue	**CY11/FY12**	**CY12/FY13**	**CY13/FY14**	**CY14/FY15**	**FY16E**	**FY17E**	**FY18E**
SKF India	0.6	2.1	2.8	2.8	2.9	2.9	2.9
Timken India	4.9	5.8	6.5	5.2	6.0	6.0	5.4
NRB Bearings	NA	NA	NA	NA	NA	NA	NA
FAG	2.4	2.5	2.4	2.3	-	-	-
Exports as % of revenue	**CY11/FY12**	**CY12/FY13**	**CY13/FY14**	**CY14/FY15**	**FY16E**	**FY17E**	**FY18E**
SKF India	8.2	5.8	7.5	7.3	6.3	7.7	7.5
Timken India	23.8	25.4	32.5	36.4	36.6	36.7	37.2
NRB Bearings	12.8	25.8	22.1	22.6	23.6	24.0	24.2
FAG	12.0	13.9	15.8	17.9	-	-	-
Import as % of revenue	**CY11/FY12**	**CY12/FY13**	**CY13/FY14**	**CY14/FY15**	**FY16E**	**FY17E**	**FY18E**
SKF India	37.4	34.7	32.3	32.5	29.9	37.5	37.7
Timken India	24.7	23.3	21.2	23.3	23.4	23.5	23.8
NRB Bearings	19.5	14.3	18.7	14.4	14.7	14.8	14.9
FAG	33.3	38.3	39.1	35.8	-	-	-

Revenue break up	SKF India	Timken India	NRB Bearings	FAG
Industrial	49%-50%	55%-60% **	NA	30%-35%
Automotive	50%-51% *	40%-45%	100%	65%-70%
OEM	55%	85%	60%-65%	80%-85%
Aftermarket	45%	15%	12%-18%	15%-20%
Exports	8%	30%-35%	22%-23%	15%-18%
Domestic	92%	65%-70%	77%-78%	82%-85%

*= Includes exports
**= Includes railway
NA=Not applicable

Source: Company, Bloomberg, Nirmal Bang Institutional Equities Research

Excise duty and import duty on bearings and its components have certain anomalies

Excise duty on automotive bearings is based on the price while excise duty on industrial bearings is not dependent on the price. There is anti-dumping duty on bearings of 18%-20% on import of bearings. There are two duty structures. One is weight- based and other is price-based. Hence, importers try to take advantage by asking for invoice of lower weight or a small item and imports higher price items or all other items. Total customs duty is 23.5% (Basic duty - 7.5%, CVD - 12%, Special CVD - 4%).

Some policies of the government are not friendly for bearing industry like the hike in duty structure on steel. In addition to customs duty, the government imposed safeguard duty of 20% on hot rolled coil or HRC steel and steel tubes in August 2014 in addition to 20% anti-dumping duty imposed last year. As a result, bearing companies have to end up paying higher duty in India as compared to the products manufactured in China. But if bearing companies in India import the finished product (bearing), they have to pay 5.0% to 7.5% duty plus CVD plus special CVD. Therefore, there is inverted duty structure in place. Bearing companies are fighting it by enhancing the service segment and giving compelling value proposition to clients. The safeguard duty of 20% imposed on hot rolled coils or HRC and steel tubes in August 2014 has been reduced to 10% in June 2015.

Capex decision in bearing industry depends on automotive OEMs' growth plan

Capex decision of bearing companies in automotive segment depends on: a) Capex plan of automotive OEM, and b) Whether the OEM is an existing client of the bearing company or a target client.

There's the long cycle of approval from an OEM which includes location approval, process approval etc. Therefore, it is not possible for bearing companies to immediately increase production unless OEMs are its existing clients and shared their production plan well in advance with them.

If an automotive OEM is a new client for a bearing company, then there is a long process of homologation of the product which the bearing company has to go through, besides other approvals required from automotive OEM.

Bearing manufacturing is a capital-intensive business. The fixed-asset turnover is in the range of 1x-1.5x. However, leading multinational companies achieved higher fixed-asset turnover on account of a significant proportion of traded goods in revenue.

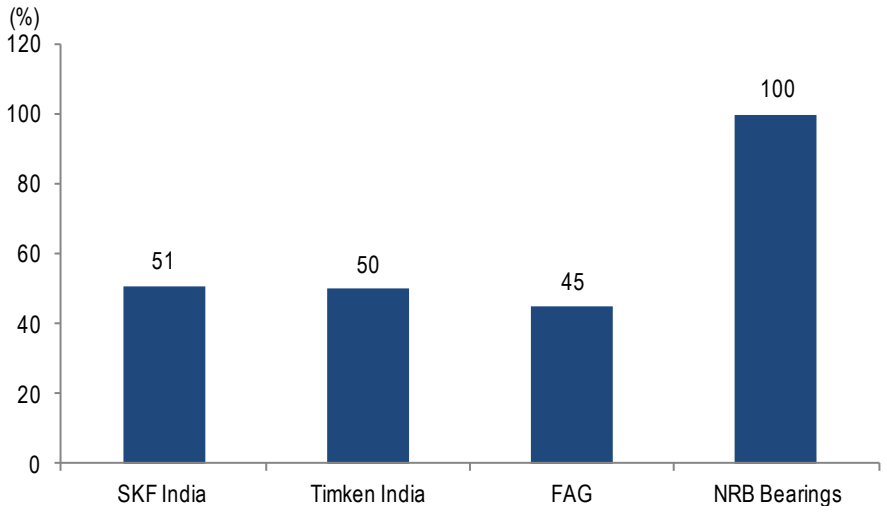
Implementation of GST (Goods and Services Tax) to ease operating environment

Our interaction with industry players suggests that implementation of GST will ease the complex structure that bearing companies currently have. Bearing companies are required to have many distribution centres across the country in order to access local billing requirement of clients. Implementation of GST will create a borderless market across various states of India.

Automotive segment

The automotive industry is the largest user segment for Indian bearing industry, accounting for almost 50% of demand.

Exhibit 53: Share of total automotive revenue (domestic plus exports) in the total revenue



Source: Company, Nirmal Bang Institutional Equities Research

Prices are negotiated on annual basis with automotive OEMs

In automotive bearings (nearly 50% of bearing market), OEM is largest segment with a 60%-65% market share. Moreover, revenue from automotive OEM segment occupies more than a 50% share in total revenue of leading bearing manufacturers. Hence, it becomes all the more important to understand the pricing dynamics in automotive OEM segment. Price negotiation is an annual exercise. The exercise starts around April/May and concludes in September every year. It takes into account various factors like commodity prices, volume for that product, value addition, availability of that product, the quality offered, ability to meet the volume demand, etc. Further, bearing company's ability to integrate the product and platform quickly, capacity to offer other allied services like mechatronics, lubrication, strong application engineering skills, product development capability, strong pedigree and experience to deliver under different operating conditions etc, increases its pricing power.

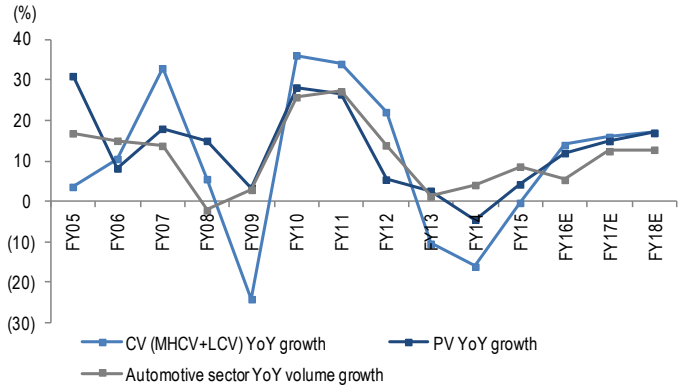
However, to stay competitive, bearing companies are not in a position to dictate the prices. There is no pass-through of any raw material cost or forex fluctuations in OEM business. Bearing companies have to negotiate them every time.

Efficiency and mileage improvement plans of automotive industry leading to change in bearing technology

Automobile makers have started giving more/large warranty for mileage and certain components for their vehicles. Energy efficiency and low weight are key dimensions for automotive industry for achieving mileage and warranty parameters. This necessitates change in design of various components. Bearing is a major component which plays a crucial role in offering enhanced warranty, especially at wheel-end. Given the maintenance practices, overloading and road conditions, bearings even assume more prominence. Hence, technological changes in components are underway. Leading bearing companies are working with automotive OEMs to migrate to high quality new products so as to reduce costs. This will lead to product change. Thus, there is technological change happening and technology advancement is the order of the day.

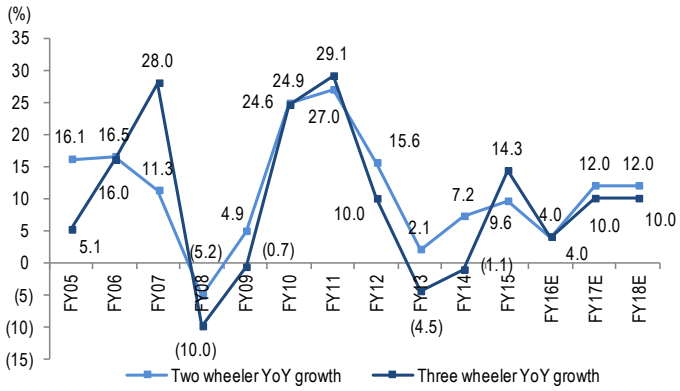
The shift to technologies like StopGo and ABS, issuance of different warranties for components and mileage, and the drive to reduce weight along with emission reduction will force technology change in bearings.

Exhibit 54: CV, PV and automotive sector YoY volume growth



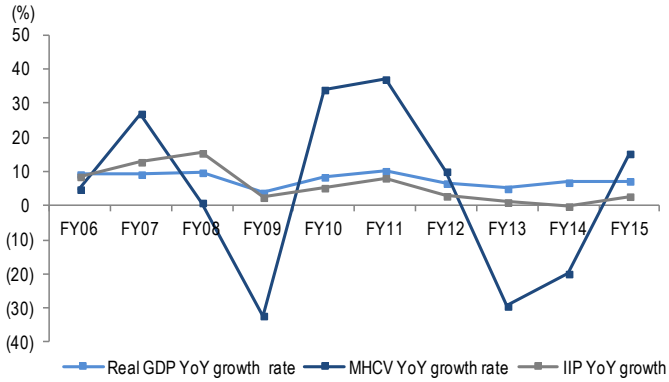
Source: SIAM, *Nirmal Bang Institutional Equities Research*

Exhibit 55: Two and three wheeler YoY volume growth



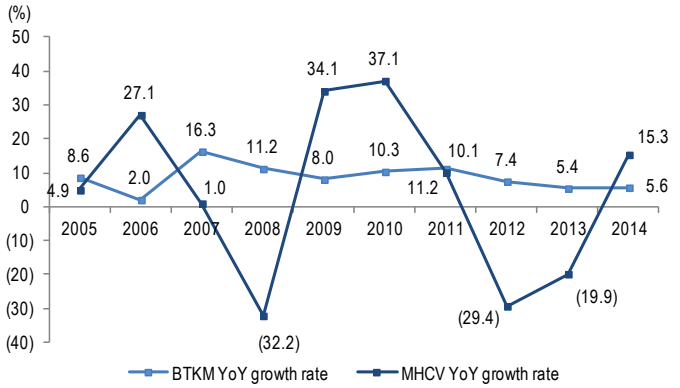
Source: SIAM, *Nirmal Bang Institutional Equities Research*

Exhibit 56: MHCV YoY growth rate, IIP and real GDP growth rate



Source: SIAM, *CSO, Nirmal Bang Institutional Equities Research*

Exhibit 57: MHCV YoY growth rate and BTKM* YoY growth rate



Note: *=BTKM=Billion tonne kilometers

Source: SIAM, *Nirmal Bang Institutional Equities Research*

Higher tonnage CVs are getting prominence and showed signs of recovery in recent past

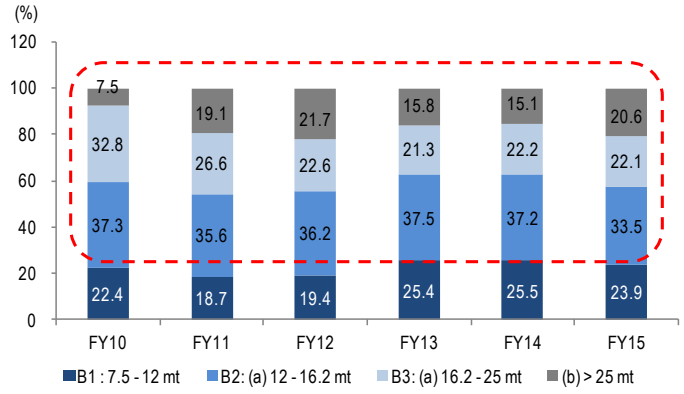
We have observed that there is decent inclination towards higher tonnage CV goods in the recent past. Growth in road freight (BTKM-Billion tonne kilometers) has a decent correlation of 0.43 with IIP growth. Assuming macro growth recovery over next one to two years, one can expect road freight growth to witness a pick-up and hence should drive growth for MHCVs. Moreover, MHCV goods volume growth has a 0.55 positive correlation with GDP growth. Resumption of road construction/mining activities and industrial capex are key growth drivers for uptick in MHCV goods volume.

MHCV segment registered a CAGR of 6% over FY03-FY15. However, higher tonnage (16.2tn-25tn and >25tn put together) categories clocked a higher CAGR of 11% over the same period, beating overall MHCV segment CAGR. Moreover, these higher tonnage categories' combined share in total MHCV volume steadily increased from 31% in FY03 to ~43% in FY15.

Tractor segment registered a CAGR of 19% over FY03-FY15. Higher tonnage (>35.2tn) tractor sub-segment reported a 66% CAGR over the same period. The near-term pressure in tractor segment is on account of erratic monsoon and rural slowdown. This segment may remain subdued for some more time.

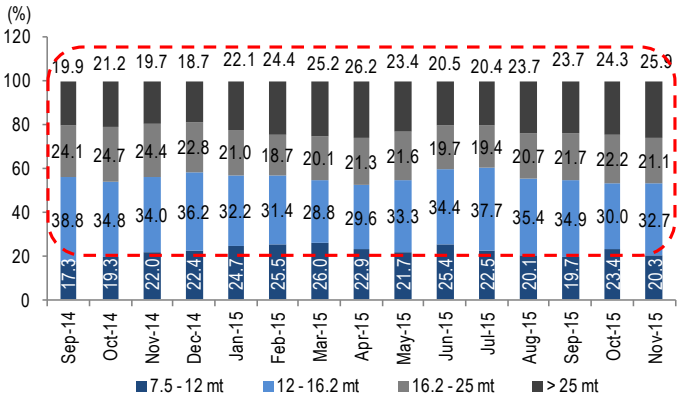
We expect total CV (MHCV+LCV) segment to clock a CAGR of 16% over FY15-FY18E and tractor segment to register a modest recovery from 2HFY17E.

Exhibit 58: Higher tonnage category dominates MHCV



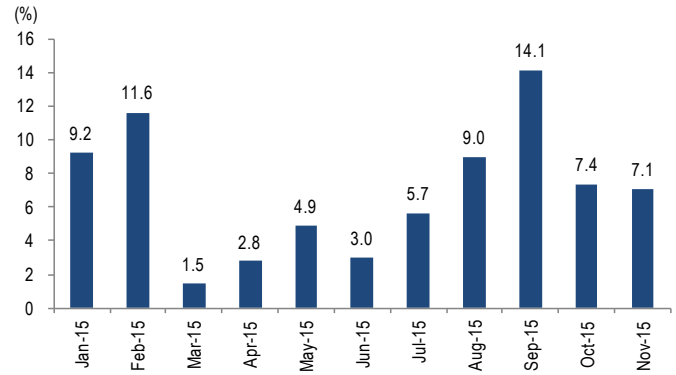
Source: SIAM, *Nirmal Bang Institutional Equities Research*

Exhibit 59: Higher tonnage category dominates MHCV



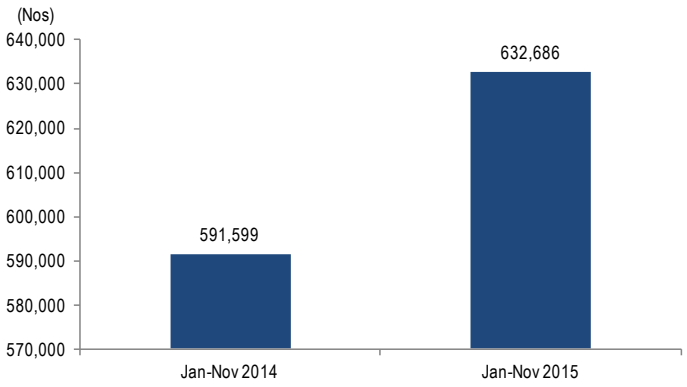
Source: SIAM, *Nirmal Bang Institutional Equities Research*

Exhibit 60: CV (incl. tractors) monthly YoY growth rate



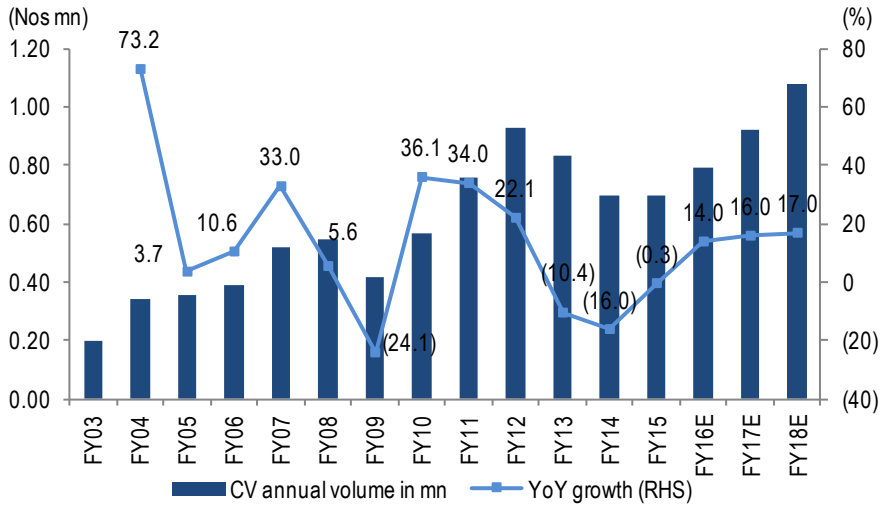
Source: SIAM, *Nirmal Bang Institutional Equities Research*

Exhibit 61: CV (incl. tractors) YTD YoY volume



Source: SIAM, *Nirmal Bang Institutional Equities Research*

Exhibit 62: CV annual volume and YoY growth

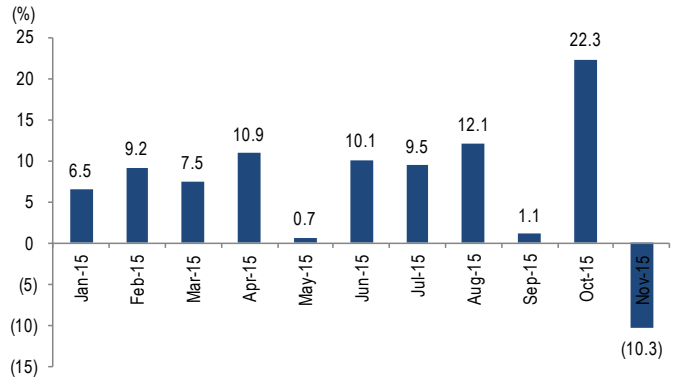


Source: SIAM, *Nirmal Bang Institutional Equities Research*

Passenger vehicles (PV) also showed some steam in past few months

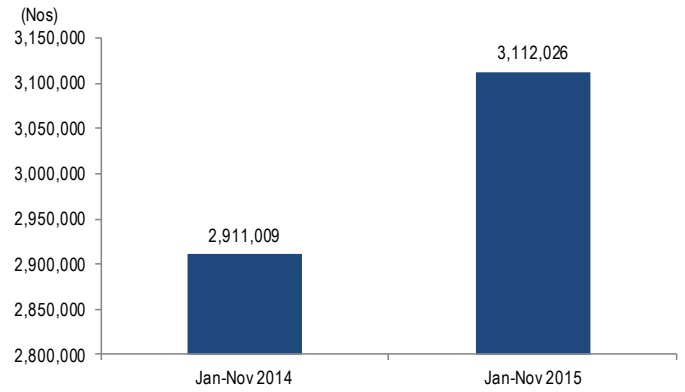
PV segment clocked a CAGR of 13% over FY03-FY15. However, the same decelerated to 1% over FY12-FY15 on account of economic slowdown, rising fuel prices and higher interest rates. However, since the past few months we have been witnessing traction in volume. The segment reported YoY volume growth of 7% over January-November 2015. We expect the growth momentum to accelerate on the back of structural positives such as low market penetration level, subdued fuel prices, rising per capita income and favourable demographics. Implementation of Seventh Pay Commission's recommendations could drive up demand for PVs as affordability for Central/State government employees will rise. Lower interest rates/inflation and benign cost of vehicle ownership could also act as demand drivers. We expect PV segment to clock a CAGR of 15% over FY15-FY18E.

Exhibit 63: PV monthly YoY growth rate



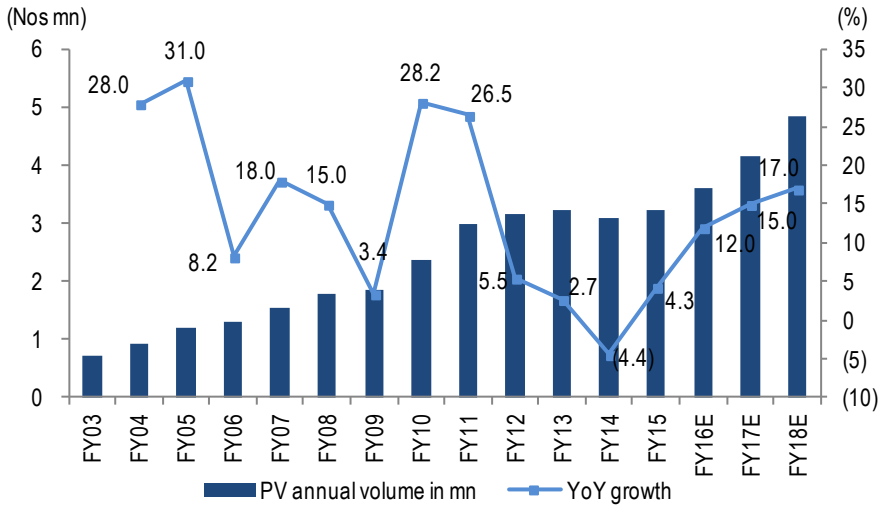
Source: SIAM, *Nirmal Bang Institutional Equities Research*

Exhibit 64: PV YTD YoY volume



Source: SIAM, *Nirmal Bang Institutional Equities Research*

Exhibit 65: PV annual volume and YoY growth

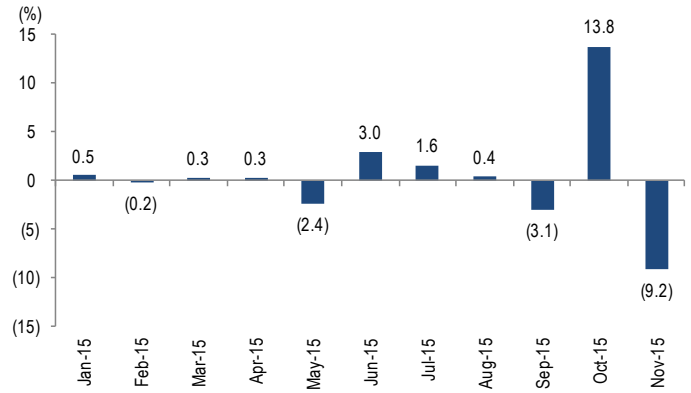


Source: SIAM, *Nirmal Bang Institutional Equities Research*

Two-wheeler segment did not do well in recent past , but likely to rebound

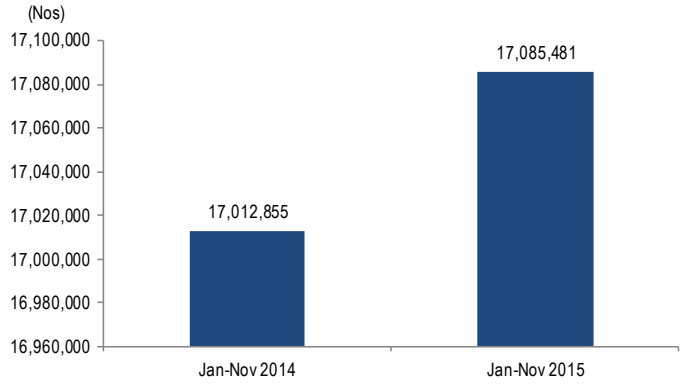
Two-wheeler segment clocked a CAGR of 11% over FY03-FY15. However, the same decelerated to 6% over FY12-FY15 on account of rural slowdown, higher inflation, rising fuel prices and higher interest rates. The segment posted YoY volume growth of 0.5% during January-November2015. We expect a 4% YoY growth in FY16E. Low penetration levels continue to support medium-term growth prospects for the industry, even as the current rural slowdown is impacting demand. The demand for scooters is likely to continue rising as the target segment has expanded to include female population. Lower interest rates/inflation and benign cost of vehicle ownership could also act as demand drivers. We expect the two-wheeler segment to clock a volume CAGR of 9% over FY15-FY18E on account of gradual recovery in rural demand.

Exhibit 66: Two-wheeler monthly YoY growth rate



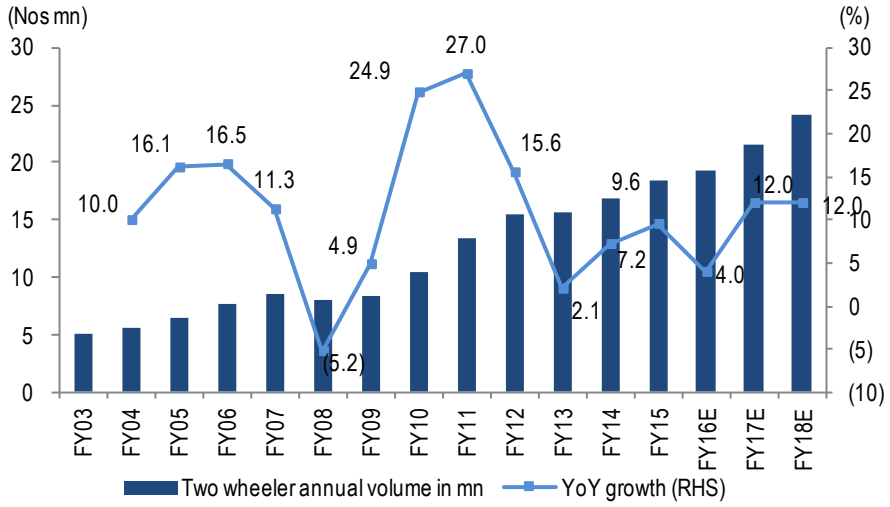
Source: SIAM, *Nirmal Bang Institutional Equities Research*

Exhibit 67: Two wheeler YTD YoY volume



Source: SIAM, *Nirmal Bang Institutional Equities Research*

Exhibit 68: Two wheeler annual volume and YoY growth



Source: SIAM, *Nirmal Bang Institutional Equities Research*

Trends observed in automotive bearing segment

- Automotive OEMs expect bearings to have high rigidity with extremely light weight and low space requirement. It should have low noise and emission levels. The company can then handle high radial and axial load and can operate at high speeds with moderate vibration and noise. They also expect high quality products from bearing companies.
- Leading bearing players are experiencing the emergence of a serious dialogue with automotive OEMs in taking the technology forward on a widespread basis for deployment and not restrict to a niche scale.
- OEMs' philosophy of controlling the machinery plays a crucial role in selecting the technology of bearings, whether first generation or third generation/sensorised bearing. OEMs may have the philosophy of measuring the speed on either brake or wheel or shaft.

- Automotive OEMs are moving towards tapered roller bearings (TRBs) in a big way. Moreover, they are moving towards higher end of TRBs, which is also good. It will limit the competition primarily within Timken India, SKF India and FAG.
- The replacement cycle in commercial vehicles (CVs) has increased by two years. The maximum extension of replacement cycle happens with a higher tonnage range. Hence, when replacement also starts it starts with the highest capacity CV first.
- Higher tonnage CVs have excess axial and radial loads. Therefore, these vehicles are not only required to have simple TRBs but also required to have more advanced or sophisticated TRBs, depending on the application and the sophistication that is built into the CV.
- Broadly the way OEMs are specifying bearing requirement and getting fitted in any vehicle currently is undergoing a change. There are alternative places to place sensorised bearings to sense the speed, emission etc. Thus, it depends on the OEM where it wants that bearing to be placed to sense the speed, condition of the wheel and its rotation.
- The bearings are also getting more sophisticated. The conventional solution featuring two individual bearings has been replaced with a compact double row angular contact bearing with integrated seals. That was the evolution of **first generation wheel bearings**. Other wheel components such as knuckles and hub were then integrated with bearings, leading to development of **second generation bearings**. Currently, **third generation bearings** are in use. These bearings have integrated flanges, built-in ABS sensors with integration of magnetic encoder-making bearings capable of sensing the speed of front wheel, effective sealing and facilitate optimised mounting that eliminates adverse influences due to manual errors. The sensors could sense the speed, movements etc. There are alternative places to sense this. Thus, it depends on the OEM where it wants that bearing to be placed to sense the speed, condition of the wheel and its rotation. It offers significant reduction in weight along with providing high-quality signal generation and transmission and thereby contributes to reduction in fuel usage and emission.

Exhibit 69: First generation bearing

Exhibit 70: Second generation bearing

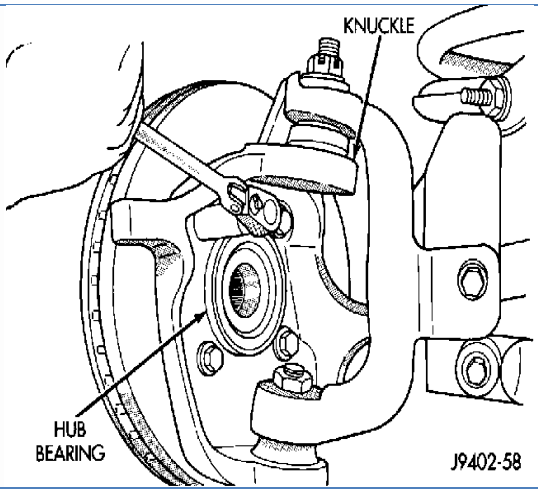
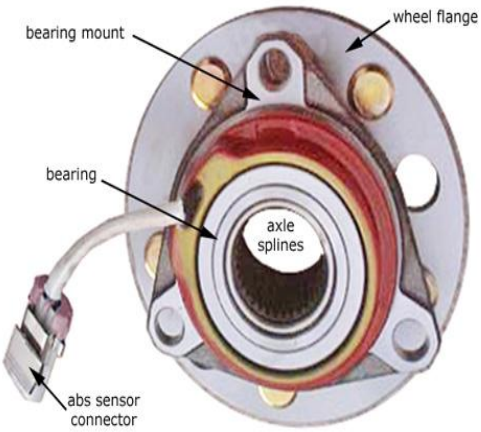


Exhibit 71: Third generation bearing



Source: Industry, Nirmal Bang Institutional Equities Research

- Implementation of ABS for CVs from October 2015 and proposed implementation for two-wheelers above 125cc engine capacity from April 2017 will give a boost to bearing companies having latest sensor technology and improve their realisation. The bearings used in ABS have realisation 3x that of the price of normal bearings allthough the number of ABS bearings will be one or two per vehicle. The GEN3HUB bearings which also called as HUB GRID solution, to be fitted in PVs and CVs, have realisation 2.0x-2.5x that of GEN1HUB bearings with a likely better margin profile. These Hub Grid solutions are fitted for a lifetime and useful to OEMs to extend higher mileage warranty. Many CV OEMs started extending mileage warranty up to 1mnkm.
- We have been given to understand that in case of tractors, efficiency was not of much importance earlier, but now it has started coming into play.

- Lot of imports from China continue, primarily of low-end, small-sized ball bearings. Standard catalogue mass market products which do not require customisation have also impacted replacement market. Dumping by China, at an average 35% lower landed price than locally sourced bearings, resulted in imports from China posting a CAGR more than double the rate at which the domestic bearing industry grew.
- The bearing industry witnessed the entry of a few new players, especially from Japan, in automotive segment. This was mainly on account of advent of many Japanese automotive OEMs in India by setting up manufacturing facilities.
- In tandem with the growth witnessed by automotive segment in India, many automotive OEMs set up procurement offices in China to cut costs as well as exert pressure on Indian bearing manufacturers to price their products reasonably. OEMs have to spend a lot of time and money in testing these bearings before starting commercial usage.
- OEM's have realised the importance of quality bearing suppliers and therefore they may squeeze bearing companies for a year or two, but they won't get a reliable supplier given such practices.
- Product liability is becoming a very important factor that is considered when automotive OEMS select an automobile component supplier. This has helped in improvement in bearing technology and sophistication. Many automotive OEMs which have tried low-cost Chinese bearings are now shifting back to leading players. This augurs well for leading manufacturers as their share in bearing market is on the rise.

Capex decision of bearing industry depends on automotive OEMs' growth plan

Capex decision of bearing companies for automotive segment depends on: a) Capex plan of automotive OEMs, and b) Whether the OEM is an existing client of bearing company or a target client.

There's the long cycle of approval from OEMs which includes location approval, process approval etc. Thus, it is not possible for bearing companies to immediately increase production unless OEMs are existing clients and have shared their production plan well in advance with bearing companies.

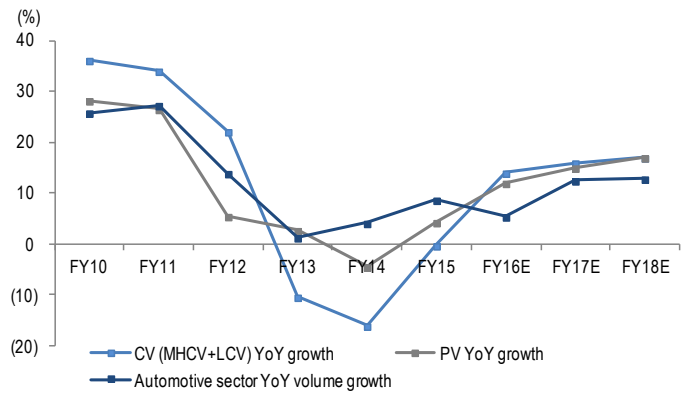
If an automotive OEM is a new client for a bearing company, then it's a long process of homologation of the product that the bearing company has to go through besides other approvals required from the automotive OEM.

Bearing manufacturing is a capital-intensive business. The fixed-asset turnover is around 1x. However, leading multinational companies achieved higher fixed-asset turnover on account of a significant proportion of traded goods in revenue.

Future growth drivers in automotive segment

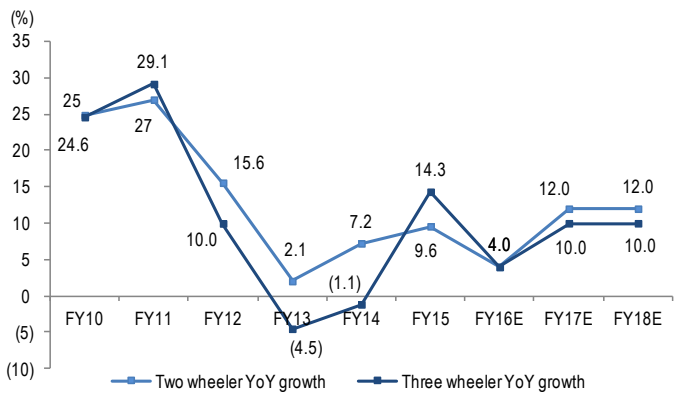
- Primary growth driver for bearing companies is volume growth across all automotive categories.

Exhibit 72: CV, PV and automotive sector YoY volume growth



Source: SIAM, Nirmal Bang Institutional Equities Research

Exhibit 73: Two and three wheeler YoY volume growth



Source: SIAM, Nirmal Bang Institutional Equities Research

- New product launches give a boost to bearing market.

Exhibit 74: List of proposed new launches

Segment	OEM	Model
Small Car	Tata	Kite Hatchback
	Maruti	Codename iK-2
	Maruti Suzuki	Baleno
	Nissan	Datsun Redi-Go
Sedans	Tata	Kite Sedan
	Toyota	New Camry
	Toyota	Vios
Utility Vehicle	M&M	Codename S-101
	Maruti	Codename iM-4
	General Motors	Adra
	General Motors	Spin MPV
	General Motors	Trailblazer SUV
	Ssangyong	X-100
	Tata	New Safari
	Volkswagan	Taigun
	Ford	New Endeavour

Source: CRISIL, Nirmal Bang Institutional Equities Research

- Car penetration in India is estimated to be as low as 18 cars per 1,000 people compared to over 77 cars in China. Production of cars and utility vehicles in India stood at around 3.9mn in 2015, compared to 20mn vehicles in China. This again points towards high potential for growth of automotive sector in India.
- The regulations around environmental and safety norms are likely to drive the focus towards environment friendly, energy efficient and safe vehicles. Regulatory demands on emission levels and improved safety norms drive OEMs to shift their focus on reducing vehicle weight and opt for lower friction technologies. Consumer demands such as higher efficiency and improved reliability from the vehicle drive OEMs to opt for modern technologies and deliver improved warranty programmes.
- In a bid to revolutionise fuel optimisation and emissions in two-wheelers, leading player SKF India has introduced StopGo sensor-bearing solution, an automatic stop-start system for two-wheelers. This innovative system can be easily adapted to lower CO2 emission and improve fuel economy by an estimated 6%-10% (depending on driving conditions).
- Broadly, the way bearings and wheels are getting specified by automotive OEMs and are getting fitted in any vehicle in the country is undergoing a change. There are different speed requirements for different segments and for different automotive OEMs, but all vehicle segments are undergoing the change.
- There are some changes happening in the way sensor bearings are getting fitted in vehicles. There are alternative places to sense this. Therefore, it depends on the OEM where it wants that bearing to be placed to sense the speed, condition of the wheel and its rotation.
- Bearing companies have introduced a few more new high-technology critical products like sensor bearings for ABS and GEN3HUB GRID bearings (third generation Hub Grid solutions) for CVs which enable automotive OEMs to give a larger mileage warranty. This initiative is likely to be a big revenue driver. ABS has been implemented for CVs from October2015 and has been proposed for two- wheelers having engine capacity above 125cc from April 2017. This will improve realisation for bearing companies. Leading players like SKF India, Timken India and FAG are front-runners to grab a major share of the opportunity. The bearing used in ABS has realisation 3x that of the price of a normal bearing, although the number of ABS bearings will be one or two per vehicle. The realisation of GEN3HUB bearings as a HUB GRID solution to be fitted in PVs and CVs have realisation 2.0x-2.5x that of GEN1HUB bearings with a likely better margin profile.
- Our interaction with industry experts suggests that for the first three years every manufacturer's product looks the same. Beyond three years, the bearing starts making noise and there is a high rate of failure etc. Thus, OEMs will be required to focus on the life cycle cost of their assets as opposed to a mere 'first cost' focus. This calls for a collaborative approach between the user, OEMs and technology suppliers, right from

the design stage to operation & maintenance and refurbishment across the entire life cycle of an asset. This provides additional opportunity for bearing companies, builds some annuity income and reduces cyclicality of OEM revenue from new product sales.

- On thumb rule basis, the average value of bearings per vehicle (including two-wheelers, CVs, PVs, off the road) range from 1.25%-1.50% of the price of vehicles, depending on the sophistication of technology used in making the vehicle. For a two-wheeler, it is up to 1% and for higher end CVs and PVs it is ~1.50%. The number of bearings required per two-wheeler is 15-20, depending on the model and technology. In terms of value, it ranges over Rs 500-Rs750 per two-wheeler. We have been given to understand by industry experts that for a CV, the estimated total amount of bearings required ranges from Rs30,000-Rs80,000. (CV requires four to eight sets of bearings and each set costs Rs8,000 - Rs10,000).

Each player has a dominant position in some type of bearing for automotive segment

- SKF India is the largest and most diversified player in bearing industry with the largest share in OEM as well as after-market segments. The company manufactures almost all types of bearings required for automotive segment. It is the largest player of deep groove ball bearings.
- FAG enjoys the status of the second-largest player in overall bearing market in India. The company has a strong presence with automotive OEMs. In addition to various types of bearings that FAG manufactures, it has higher share in wheel bearing segment. FAG is the leader in manufacturing roller bearings – cylindrical roller bearings and spherical roller bearings.
- Timken India is the leader in tapered roller bearings and has a dominant market share in MHCV segment. The company is not present in ball bearing segment. Timken India has a large presence in MHCV OEMs.
- NRB Bearings is a pure play on automotive segment unlike all other companies discussed above. It is the market leader in needle roller bearings with ~70% market share in this product category. Needle roller bearing finds application when space is a constraint and load-bearing capability is needed. For this product, the company is the largest supplier to automotive OEMs.
- Going forward, two things will influence bearings: a) Material science, and b) Advent of new automobile technology (driverless car or car running on battery). If cars go the electric way, it will be bad news for bearing manufacturers on the engine side of demand. However, the demand for bearings required for wheels will continue. At present, both Reva electric car in India and Tesla in the US have SKF bearings.
- At a recent vendor conference, India's largest PV OEM gave guidance that it will prefer vendors who have own R&D in India and do not depend on parent company in the developed world.

Exhibit 75: Each player is leader in particular type of bearing

Particulars	*Overall market share (%)*	Specialised and Leadership in	*Market share in product (%) specialised*	Nearest competitor
SKF India	*28*	Deep groove ball bearing	*45*	FAG
FAG	*20*	Spherical and Cylindrical ball bearing	*40*	SKF India, Timken India
NEI	*17*	Spherical and Cylindrical ball bearing	*20*	Timken India
Timken India	*10*	Tapered roller bearing	*45*	NEI, FAG
NRB Bearings	*7*	Needle roller bearing	*70*	INA

Source: Industry, Nirmal Bang Institutional Equities Research

Industrial segment

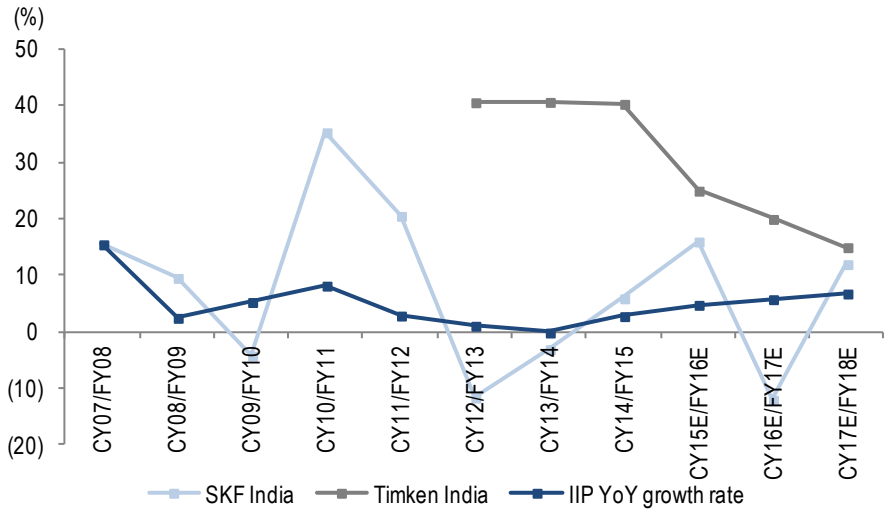
This segment has huge potential and currently occupies around 50% of organised bearing market in India. . Industrial segment includes sectors like railways, metro trains, wind energy, machine tools, MRO, textile machines, industrial gearboxes, steel, cement, food and beverages etc. Practically, every industry requires bearings, either directly or indirectly.

Modernisation and expansion of railways, inviting private sector players in defence production and reopening of mines is likely to foster growth in the segment and allied industries.

Industrial segment bearing is characterised by large size, high realisation and margins, need for customisation, low production volume and large variety or types. Industrial bearings have higher technology and capex requirement. The manufacturing process is more complicated. The homologation period of industrial bearings is longer than automotive bearings. All these factors make it difficult for bearing companies to decide whether to go for own manufacturing or import the bearings.

We are estimating late recovery in the industrial segment revenue growth rate of SKF India while Timken India likely to face challenging situation in the industrial segment revenue growth rate.

Exhibit 76: YoY growth of industrial revenues of SKF India and Timken India versus IIP growth



Note: We have taken revenue from traded goods as proxy for revenue from industrial segment

Source: Company, CSO, Nirmal Bang Institutional Equities Research

Attributes of high quality industrial bearing

A good quality industrial bearing has low friction which minimises power loss in industrial transmission. It offers higher load-rating capability in minimum space.

Industrial bearings are different on many counts than automotive bearings

Industrial bearings are different in many respects compared to automotive bearings. Industrial bearings have different manufacturing process in which production volume is low, but of application-specific customised nature products only. Production of industrial bearings requires higher investment in respect of long homologation period, supply chain etc. Hence, manufacturing industrial bearings is almost an independent operation.

Industrial bearings take a long homologation period which is a good entry barrier

Industrial bearings are not easy to homologate and take a long time. It could run between 12 months to 36 months. This is on account of long duration staged approval process wherein the industrial customer likes to test, approve and then make the decision to buy and after this the bearing manufacturer goes for commercialisation. For example, in the case of wind energy sector it is 18 months and in case of railways it is 36 months. Therefore, it depends on: a) The application of bearing, b) Industry standards followed, c) Consequential cost of failure of the product using that type of industrial bearing, and d) Capacity of the bearing to operate reliably under extreme operating conditions.

Local manufacturers are not in the game of supplying industrial bearings to OEMs

Large OEM consumers of industrial bearings include railways, steel plants, wind energy generators, oil & gas, machine tool sectors, etc. As discussed earlier, industrial bearings require a lot of customisation and is low volume game with a long homologation period. All these factors translate into requirement of huge investments and becomes prohibitive for a local manufacturer to enter the industrial OEM segment. Hence, lack of world class infrastructure and technology keeps local manufacturers out of the arena of OEM suppliers of industrial bearings. Hence, these players are not there in large industrial OEM contracts of clients like Indian Railways, Steel Authority of India, Tata Steel, ONGC, NTPC, Bharat Heavy Electricals, Coal India etc.

Localisation of industrial bearings is the new trend

Most multinational companies have set up plants for industrial bearings outside the listed entity they already have in India. These plants are wholly-owned subsidiaries of overseas parents. Leading multinational players listed in India like SKF India, Timken India and FAG have their parent's presence through unlisted wholly-owned subsidiaries. SKF Technology India Private Ltd, a wholly-owned subsidiary of the parent in India since 2010, is dedicated for manufacturing large-sized industrial bearings for wind energy, railways and other industries. INA Bearings India Private Ltd, a fellow subsidiary of FAG Bearings India, has a manufacturing facility specialising in rolling bearing and precision parts catering to automotive and industrial sectors. Timken India Manufacturing Private Limited, a private company 100% owned by Timken based in the US has an export-oriented manufacturing facility in Chennai since 2008.

Is this a risk to the business of the listed entity and in turn to its minority shareholders?

The kind of risks involved in manufacturing these products (which these unlisted subsidiaries are manufacturing) are strenuous to financial health of listed companies and therefore unjustifiable. This is because most of the products coming out of unlisted subsidiaries for industrial segment involve low volume, large size, and very high capital-intensive nature with a long homologation period. All this poses risk to financial health of the listed entity and in turn to its minority shareholders. However, in order not to deprive the listed entity's right and also to avoid conflict of interest or cannibalisation of market share, these products are sold only through the listed entity in India. The listed entity follows transfer pricing regulations while buying from unlisted entities.

What are the factors that determine investment decisions?

Industrial bearing is a different cup of tea as compared to automotive bearing. Industrial bearings have totally different manufacturing process, supply chain, etc. These are almost independent operations. Therefore, the investment decision is based on where it is most logical to set up the plant. Many bearings cannot be manufactured in India because the tooling costs are prohibitive and the volume is not enough to justify the investments. Moreover, particularly in the case of industrial bearings, the bearing company has to build the infrastructure first and then get the sample batch of bearings manufactured for a long duration homologation process. The stage of commercial production is reached only after the product gets approved by the client. In after-market segment, the state of market demand is also an additional influencing factor. Therefore, considering all these factors it takes almost seven to eight years for the industrial bearing factory to come into the black. All these factors need to be considered before deciding the investment.

Distribution of industrial bearings

The distribution of industrial bearings is done by manufacturers to OEMs directly. If the bearing is imported, it takes anything between six weeks to six months, depending on the size and complexity and the diversity of the bearing. In after-market segment, the companies have a vast distribution network. These distributers have stocks available with them and bearing manufacturers are aware of the rolling schedule of demand and production. Hence, it takes one week to four weeks to deliver the product through the distribution network.

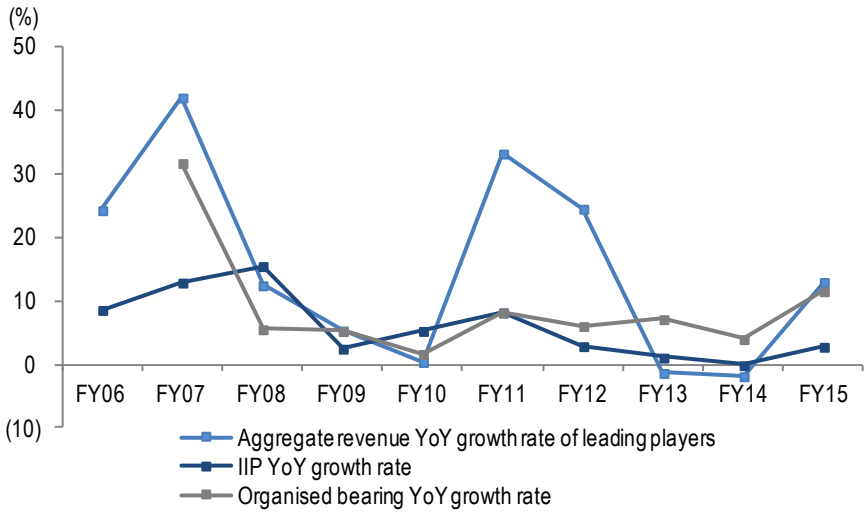
China's competition in industrial bearings is low

China is a champion in the production of large scale stereo-typed bearings which are used in the automotive space. Chinese suppliers have got some success in supply to OEMs as a few Indian automotive OEMs have set up procurement offices in China. However, industrial bearings are more customised in nature with a low volume. Chinese manufacturers are not present in a big way in India in this segment. On the OEM side, it's more difficult for them. The after-market is relatively easy to penetrate on account of the distribution base, but certainly not a cakewalk. Industrial bearing companies are required to have business relationships, technical competency and also their local set-ups to constantly remain in touch with clients and markets. The industrial bearing market is a different cup of tea altogether.

Growth drivers for industrial bearings

- The focus of organisations should be on life cycle cost of their assets as opposed to a mere 'first cost' focus. This calls for a collaborative approach between the users, OEMs and technology suppliers, right from the design stage to operation & maintenance and refurbishment across the entire life cycle of an asset.
- Rapid industrial growth led by new capacity expansion in the economy along with higher capacity utilisation and investment in infrastructure like railways, metro trains, mining, power generation etc. will be growth drivers for industrial bearings.

Exhibit 77: Aggregate net revenue growth of leading bearing companies, organised industry growth rate and IIP growth



Note: *=Aggregate net revenue of SKF India, Timken India, FAG, NRB Bearings, ABC, MENON

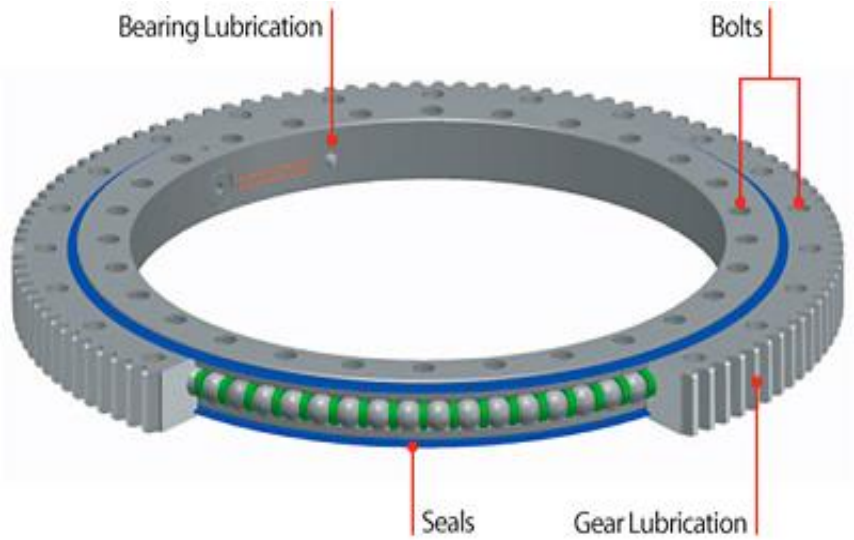
Source: Industry, CSO, Nirmal Bang Institutional Equities Research

- Though the localisation of industrial bearings increased in the recent past, a few types of large-sized bearings, used predominantly in heavy industries, continue to be imported in India. Reduction of import tariff has made this route more viable.
- Defence sector and railways are going to be bigger sectors in the medium term as well as long term.

Wind energy offers a large opportunity

- Wind energy segment uses high-technology, large diameter bearings. There are five to six applications of bearings in a wind turbine such as the blades, generator, gear box, main rotor shaft, pitch arrangement etc.
- Slewing bearings play an important role in wind turbines. These bearings take full advantage of available wind and optimise energy output. These bearings are used for pitch and yaw applications. *(To "slew" means to turn without change of place; a "slewing" bearing is a rotational rolling element bearing that typically supports a heavy but slow turning or slow oscillating load, often a horizontal platform such as a conventional crane, a swing yarder or the wind-facing platform of a horizontal axis windmill).*
- The important quality of wind energy bearing like main shaft bearing is to enable very compact nacelle designs with main gearboxes or directly-driven generators mounted close to the rotor hub. The result is a significant reduction in size, weight, maintenance and turbine costs. *(A nacelle is a "cover housing" that houses all of the generating components in a wind turbine, including the generator, gearbox, drive train, and brake assembly).*

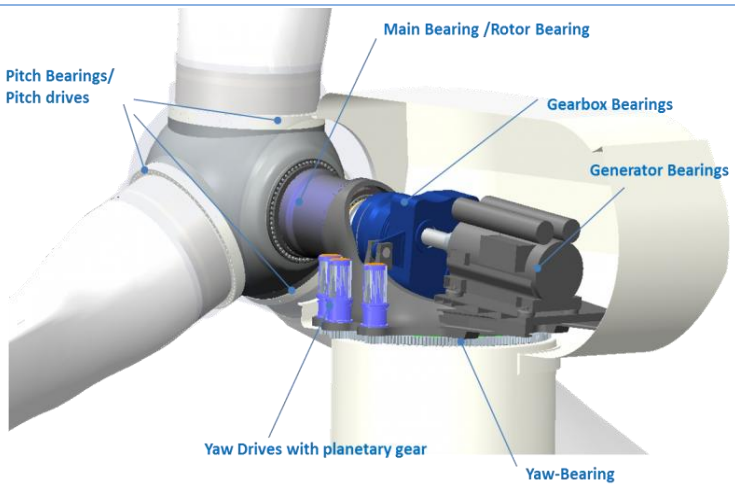
Exhibit 78: Slew bearing



Source: Industry, Nirmal Bang Institutional Equities Research

- Another important factor to be considered for wind energy bearings is that they must operate reliably under extreme operating conditions like high dynamic forces with extreme peak loads and minimal loads, sudden load reversals and widely fluctuating operating temperatures. Wind energy OEMs face challenges like downtime on account of grease leakage from slewing bearings. Players like SKF have successfully worked with wind energy OEMs to overcome such problems.
- As regards wind energy, the government wants to have 15GW of wind power installed in India over FY13-FY17E.
- Earlier, wind energy bearings used to be imported, but SKF India has successfully penetrated this market and has become the largest player in India with latest market share of 68% of the assortment. Another big player in wind energy space is FAG. Both these companies offer a range of products and services like condition monitoring systems, lubricants, and mounting and maintenance tools which allow wind energy OEMs to achieve low operating costs for wind turbines. Their know-how encompasses the entire power train system and ranges from simulation, planning, manufacturing; installation to support services. This augurs well for wind energy OEMs in terms of reduction of lead time and getting local application support partner for routine problems including grease leakages from slewing bearings.
- Homologation period for wind turbine is around 18 months. Hence, high technological competence, continuous technology support requirement along with a long homologation period acts as an entry barriers for local manufacturers.

Exhibit 79: Wind turbine bearing (slewing bearing) and cross section of wind turbine



Source: Industry, Nirmal Bang Institutional Equities Research

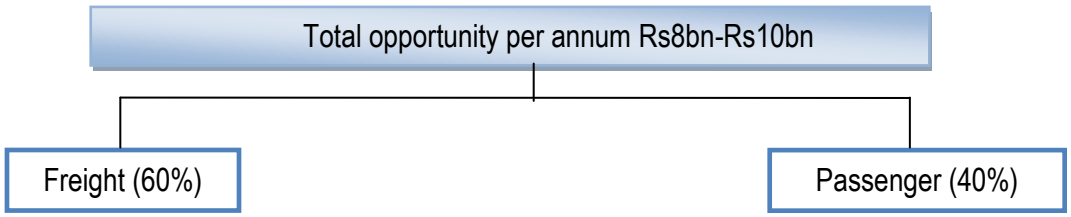
Railway, metro rail and Dedicated Freight Corridor projects poised for next big leap

- Indian Railways is the second-largest consumer in the Indian bearings market after the automotive sector. However, it is the largest consumer of industrial bearings. Annual demand for bearings from Indian Railways is in the range of Rs8bn-Rs10bn. With triggers like emphasis on safety, modernisation, high-speed trains, high-speed locomotives and coaches, high-speed corridors, metro trains etc., market size of bearings for railway application and consequently industrial bearings segment is expected to witness a higher CAGR for the next few years as compared to past few years.

  The bearings required by Indian Railways are for wheel sets, drive units and power train applications. Indian Railways is directionally moving towards higher safety standards and will start using bearings as a point of data extraction as opposed to the current cumbersome system of mounting the sensor bearings on/with braking system. SKF India has proposed to Indian Railways to mount the bearing on wheels which will help it to manage safety at a much higher level.

  Indian Railways' market is divided into two sub-segments - freight (60% share) and passenger (40% share). Timken India is present in both sub-segments and enjoys the highest total market share in the range of 25%-35%. SKF India, FAG and NEI are also present in the railway space. SKF India and FAG are mainly in passenger sub-segment. SKF India has now got the status of an approved supplier for freight sub-segment. Railway segment, which was not very crowded since the past two years, has suddenly become very competitive. Except for Timken India, other suppliers of industrial bearings to railways in India like SKF India, NEI and FAG either import these bearings from their parent companies or manufacture them through their respective unlisted wholly-owned subsidiaries of overseas parents.

Exhibit 80: Indian Railways annual opportunity size



Source: Industry, Nirmal Bang Institutional Equities Research

- The demand from Indian Railways will emanate from two sources – mandatory replacement of the components and new build – new rolling stocks and locomotives. At present, a lot of requirement is based on mandatory replacement and not much on new build. Therefore, as Indian Railways starts modernisation, the share of new build will go up. It will offer a completely new opportunity.
- The opportunity offered by Indian Railways is big and comes from four dimensions. One is Dedicated Freight Corridor (DFC). If the government takes a decision to go for higher tonnage freight carrying capacity, then it will give rise to a completely new set of rolling stock. This will offer new opportunity for bearing companies. However, it will be back-ended and likely to begin from FY19 or FY20. Secondly, the focus is on safety of trains, mainly passenger trains. This indicates the thrust going forward on monitoring and conditioning of rolling stock (passenger and freight) and locomotives on a regular basis compared to minimal as of today. Thirdly, it will come from high-speed trains which India is planning to start from 2020. High-speed trains need completely different bearings and technology. Timken India and FAG are present in this segment. SKF India recently made a presentation to railway authorities to show it that there is no high-speed train in the world which does not have SKF bearings. Fourthly, it will come from metro train projects. While growth from DFC project could be back-ended, we expect metro rail projects and opportunity for refurbishment/service of existing wagon fleet to be near-term drivers.
- **Fast trains like Shatabdi and Rajdhani** – Shatabdi and Rajdhani are high-speed trains with an average speed of 130km/hr as against normal trains with an average speed of 70km/hr. Indian Railways operates 24 pairs of Shatabdi Express and 24 pairs of Rajdhani Express as of September 2015-end. These trains are now using latest LHB (Linke Hofmann Busch) coaches to provide extra comfort in the train. The coaches are designed for an operating speed up to 160 km/hr and could go up to 200 km/hr. They are considered to be 'anti-telescopic', which means they do not get turned over or flip in case of a collision (mainly head-on). These coaches require advanced technology tapered roller bearings. These bearings have a lower volume but higher margins.

- **High-speed train is a relative term. As per global definition of high speed, Indian tracks are not fit for running trains on globally accepted limit of high speed. Therefore, some amount of increase in speed requires minor adjustments to signaling system and track, but there is no need for rolling stock to go for any component change.**
- **The bearings are required by Indian Railways in wheel sets, drive units and power train application. Indian Railways is directionally moving towards higher safety standards and will start using bearings as a point of data extraction as opposed to the present cumbersome system of mounting sensor bearings on/with braking system. SKF India has proposed to mount the bearings on the wheels. That will help in managing safety at a much higher level.**
- **Railway Budget 2015-16 highlighted a five-year investment plan. The total plan outlay over 2015-2019 is envisaged at Rs8.56trn. This plan indicates estimated investment of Rs650bn for high-speed rail & elevated corridor and Rs1.02trn for rolling stock which includes locomotives, coaches and wagons.**

Exhibit 81: Indian Railway's proposed investment plan (2015-2019)

Indian Railway Plan out lay for following items (Rsbn)	2015-2019
High speed rail & elevated corridor	650
Rolling stock (Locomotives, coaches, wagons - production and maintenance)	1,020
Safety (Track renewal, bridge work, ROB, RUB, and Signalling & telecom)	1,270
Other	5,620
Total	**8,560**

Source: Highlights of the Railway Budget 2015-16, Nirmal Bang Institutional Equities Research

- **The Budget also mentioned about increasing the speed on nine corridors immediately up to 160/200kmph. These corridors are: Delhi-Agra, Delhi-Chandigarh, Delhi-Kanpur, Nagpur-Bilaspur, Nagpur-Secunderabad, Mumbai-Goa, Mumbai-Ahmedabad, Chennai-Hyderabad and Mysore-Bengaluru-Chennai.**

Exhibit 82: Corridors selected for increasing the speed

Corridors selected for increasing the speed in the recent budget	
Delhi-Agra	Nagpur-Secunderabad
Delhi-Chandigarh	Mumbai-Goa
Delhi-Kanpur	Mumbai-Ahmedabad
Nagpur-Bilaspur	Chennai-Hyderabad
Mysore-Bengaluru-Chennai	

Source: Highlights of the Railway Budget 2015-16, Nirmal Bang Institutional Equities Research

- **As existing locomotives and Linke Hofmann Busch (LHB) passenger coaches are to be used in the first phase, no separate allocation for these trains was done. LHB coaches have German technology and are designed for an operating speed up to 160 km/h and could go up to 200 km/h. They are considered to be anti-telescopic, which means they do not get turned over or flip in case of a collision (mainly head-on).**

Exhibit 83: Coaches addition schedule

Particulars (Nos)	10th plan addition	11th Plan addition	12th Plan target
Coaches (all types)	12,202	17,085	33,066

Source: Indian Railways Demand for Grants Report, Nirmal Bang Institutional Equities Research

- **Indian Railways plans to spend Rs1trn in the next five years or Rs200bn per annum to procure locomotives compared with Rs160bn spent in FY15. As of 2014-end, Indian Railways had 10,500 locomotives in its fleet across steam diesel and electric categories. With a couple of plants at Marhora and Madhepura coming up, Indian Railways will get, on an average, additional 200 locomotives each year for a period of 10 years.**

Exhibit 84: Locomotives addition schedule

Particulars (Nos)	10th plan addition	11th Plan addition	12th Plan target
Diesel locomotives	622	1,288	2,000
Electric locomotives	524	1,218	2,010

Source: Indian Railways Demand for Grants Report, Nirmal Bang Institutional Equities Research

- **Wagon order placement is a good indicator of railway business. Wagon bearings have a four to five year replacement cycle. Indian Railways require additional 17,000-18,000 wagons annually to meet growing demand. While no tender was has been floated for FY15 as yet, the order for 9,000 wagons issued recently was for FY14 and the delivery of wagons is yet to begin. With an average wagon life of about 30 years, Indian Railways had a wagon fleet of nearly 0.23mn wagons as of January 2015-end, of which about around 0.15mn wagons were BOXNHL (box-type) which are usually used to carry coal and ores and needed to replaced soon. Hence, there is likely to be huge replacement demand. Moreover, Indian Railways plans to add 105,659 wagons or nearly 21,000 wagons per annum over FY16E-FY20E.**

Exhibit 85: Wagon addition schedule

Particulars (Nos)	FY11	FY12	FY13	FY14	FY15	FY16E	FY17E	FY18E	FY19E	FY20E
Wagon procurement by Indian Railways	16,500	18,357	16.894	9.326	13,162	21,000	21,000	21,000	21,000	21,000

Source: Indian Railways Demand for Grants Report, Nirmal Bang Institutional Equities Research

- We have been given to understand that the number of bearings required for a wagon is eight. As there is a lot of thrust on increasing the speed and axle load capacity of freight and passenger rolling stock, the bearings are required to be more advanced in terms of technology. Consequently, the average cost per bearing to go up significantly.
- As per the latest presentation by Timken Co based in the US, the life-time opportunity for bearings for a 100 freight wagon rake is US$800,000. The life of a freight wagon is assumed as 35 years and bearing life as 5 years. Therefore, there will be seven replacement cycles for bearings. This translates into an opportunity of US$1,143 per wagon per replacement cycle of five years. At an exchange rate of Rs65/1US$, it works out to be Rs74,200 per wagon per replacement cycle of five years. Hence, we can assume that the opportunity is in the range of Rs70,000-Rs80,000 per wagon per replacement cycle of five years.
- Once the expansion and modernisation of railway infrastructure is complete, the opportunity size for large-sized advance technology bearings for high-speed coaches, large axle load freight wagons, metro train coaches and locomotives gets widened.
- The recent announcement of awarding electric locomotive manufacturing project to Alstom has widened the opportunity size. The plant will be set up at Madhepura in Bihar. Timken India has been working closely with Alstom on this project. Similarly, the decision on diesel locomotive plant at Marhora in Bihar has gone in favour of GE. These two projects will expand the locomotive bearing market size by 200 locomotives per annum from 700 locomotives per annum currently.
- FAG has participated in EMU expansion project of MRVC (Mumbai Railway Vikas Corporation). FAG provided imported bearings for drive train and indigenously manufactured spherical roller bearings to Siemens trains in India. New advanced Bombardier coaches for Delhi Metro Rail Corporation (DMRC) have also been fitted with FAG bearings for wheel set applications.
- Normal passenger coaches run with spherical roller bearings and locomotives on cylindrical roller bearings. FAG and SKF India are strong in this segment. However, with more focus on high-speed trains like Shatabdi and Rajdhani - which run with high-speed tapered roller and cylindrical roller bearings - Timken India has got prominence. Timken India is the only company in India which manufactures these high-speed passenger coach bearings (tapered roller bearings). Timken India also partners with Indian Railways on refurbishment and reconditioning of these bearings.
- As freight rolling stock and locomotives are run only with tapered roller bearings, Timken India gets a major chunk of the business.
- Two-thirds of the bearing demand of Indian Railways is met by imports. However, leading multinational players have started manufacturing industrial bearings for railways in India through their unlisted wholly-

owned subsidiaries. However, these bearings are sold to Indian Railways only through listed entities of these multinational companies in India. This will certainly reduce bearing imports going forward.

- Margin on industrial bearings for railways is higher even from the perspective of listed entities of multinational companies.

- Indian Railways has a policy of awarding 5% of the contract to the vendor in the first year, 15% in the second year, and then the vendor get a level-playing field with other vendors. Indian Railways recently made some changes in the prequalification process for vendors. Now a vendor has to go through the approval process only once. Indian Railways has started insisting on AAR (American Association of Railroads) certification which is a very high standard for railway application bearings. SKF Technologies (unlisted subsidiary of parent company in Ahmadabad) is in the process of getting it and is expected to get it shortly which will make SKF Technologies the only AAR-approved facility for manufacturing seals in this part of the world. This will make life easy for SKF India for quick localisation of railway bearings, which currently can take anywhere between three to five years. Going forward, a substantial part of industrial bearing supply to railways will be localised.

Metro railway is a sunrise segment

- **Metro railways,** which is a very small market for bearings at present, is likely to post a higher growth rate going forward. With nearly 18 metro rail projects either under construction or at planning stage in various cities. FAG and Timken India are currently supplying to operational projects where Alstom and BEML - Rotem coaches are used. BEML-Rotem is currently supplying to Delhi, Bengaluru and Jaipur metro rail projects. The current size of opportunity is estimated at Rs500mn per annum and is likely to go up with more and more projects expected to come on stream.

- **There are six cities currently where metro trains are operational – Delhi, Kolkata, Mumbai, Chennai, Bangalore and Jaipur.**
- **There are a few metro train projects under various stages of development.**
- **Under construction - Hyderabad, Kochi, Lucknow, Navi Mumbai, Noida (Delhi), Ahmedabad and Nagpur are expected to get operational between 2016 and 2018. Construction of Mumbai phase 3 project has just begun.**
- **Under planning – Mumbai phase 2, Pune, Kanpur, Chandigarh, Indore, Guwahati, Agra, Indore, Bhopal and Vishakhapattanam projects.**

Dedicated Freight Corridor (DFC) project likely to offer Rs2bn-Rs5bn per annum opportunity from FY19

DFC is a project for new railway lines exclusively for carrying freight isolated from normal railway traffic and passenger trains. Conceived in FY05, the planning began in FY06, and in FY08 initial proposals were drawn up. The entire DFC project includes 2,700km or so of exclusive freight lines (new construction), and about 5,000km of feeder lines which includes some new lines and many existing lines that will be upgraded. DFC is going to carry a higher axial load which means requirement of large-sized bearings.

Timken India is the partner with Indian Railways in selecting the bearing for DFC. The wagons are expected to be heavy haul with an axle load of 32.5tn compared to 22.9tn currently. Average speed is also likely to increase from 75km/hr for single stack to 100km/hr double stack. For this, Indian Railways has to build new wagons or freight coaches. Given the higher axle load and average speed, the expected opportunity from both value per wagon perspective and the volume of new wagons is likely to be significant for bearing manufacturers. We have been given to understand that the likely opportunity from DFC will be back-ended for bearing manufacturers and pegged in the range of R2bn-Rs5bn beginning FY19 or FY20. It is estimated that more than 25,000 wagons of new design will be required.

Exhibit 86: Proposed load and speed parameters under DFC

Features	Existing	On DFC
Axle load	22.9tn/25tn	32.5tn/25tn for track superstructure
Track loading density	8.67tn/m	12tn/m
Maximum speed	75kmph	100kmph
Stacking	Single stack	Double stack

Source: DFC

Exhibit 87: Types of bearings used in railway and vendors

Particulars	Normal Passenger coaches	High speed Passenger coaches	Metro Coaches	Freight Wagons	Locomotives Diesel/Electric	DFC
Type of bearing used	Spherical roller	Cylindrical roller	Cylindrical roller	Spherical roller	Cylindrical roller	Tapered roller
		Tapered roller	Tapered roller	Tapered roller	Angular ball bearing	
					Tapered roller	
Main vendors	FAG, SKF India, NEI	SKF India, Timken India, FAG	Timken India, NEI, FAG	Timken India, NEI	SKF India, Timken India, NEI	Timken India, SKF India, FAG, NEI

Source: Industry, Nirmal Bang Institutional Equities Research

Metal sector requires high-performance bearings

Some of the most demanding applications of bearings are in metal industry, where the working environment is extraordinary in most respects. The temperature is extreme and the load is highly variable. Dust, contaminants and humidity prevalent over there can cause expensive unplanned stoppages and safety-related problems. Recurring high speeds, shock loads and high torque further add to the pressure on production assets. The demand for uptime is constant.

In a hot-strip mill, rolling bearings in roughing stand transmit radial load of up to 30,000 kN. (kN = equivalent dynamic or static load).This is very high. Hence, bearing companies have to design bearings based on in-depth understanding of application, speed, load, fluctuations, temperature, lubrication etc. This means rolling bearings have to be customised to perform efficiently in an unfavourable operating environment.

There are lots of local manufacturers supplying to steel industry in the replacement market and competing with multinational players. This is on account of the fact that the pricing difference between them is lucrative enough for the users to settle down for lower quality product.

Services segment

Service segment gives bearing manufacturers an opportunity to remain engaged with clients. Large clients of industrial bearings have realised the importance of reducing life cycle cost through regular maintenance. This has opened up a new revenue source for the domestic bearing manufacturers. Bearing companies have started selling various allied services like refurbishment, MRO, lubrication etc. across various user industries. The market size for all these allied services has been estimated at 10x, the size of organised bearing market. SKF India has taken the lead in this segment by launching five different services. Timken India has set up gearbox refurbishment facility at Raipur. FAG has started focusing on reducing life cycle cost by providing solutions for preventive maintenance.

- Each player is focusing on other complementary products and services to improve client engagement to boost sales of bearings and to diversify revenue stream. It includes seals, mechtronics, bearing mounting / dismounting/alignment, lubrication systems, shaft alignment, condition monitoring, failure analysis, comprehensive maintenance management etc.
- This will enable an increasingly larger role as a preferred partner to a wide spectrum of clients in the industry.
- In after-market segment, bearing manufacturers undertake service projects at client locations through a range of condition monitoring services which minimizes the risk of breakdown, consequent damages and thus allow clients achieve reduction in downtime. The total cost of ownership gets reduced through predictive maintenance practices. For example, around 30% of premature failures in mechanical equipment are caused by poor or inadequate lubrication. Automating this aspect ensures replenishment at the correct interval, at all points where it is required and with the correct quantity.
- We have been given to understand that the current addressable market size in India is estimated at Rs500mn per annum and is growing at a very high double-digit rate every year.
- As per the rule of thumb, the potential of service segment is estimated 10x the size of organised anti-friction bearing market globally.

The bearing companies have combined its knowledge and experience with the latest technology to develop solutions for specific conditions for various industries.

- VOGEL and Safematic are globally recognised SKF brand names in the field of automatic lubrication systems.
- Bearing companies are extending these services to different industries. For example, in steel segment, FAG, SKF India and Timken India offered comprehensive cold roll shop maintenance services to one of the largest steel plants in India.
- FAG also worked very closely with companies like Elecon and Siemens to optimise bearing arrangements (consist of bearings but include associated components such as shafts, housings, seals etc.) in transmission, at a very early stage of the project to ensure that principles of efficiency and optimisation are built into transmission design.
- SKF India has become the single source of providing comprehensive onsite support for all-condition monitoring activity covering rotary, static and electrical equipment for oil and gas exploring company from North India. SKF India offered an umbrella portfolio of condition monitoring services including vibration, oil analysis, electrical and non-destructive tests. As a part of the contract, SKF India successfully identified and deployed partners for delivery of the services which were not part of its in-house offerings. SKF India used its project management skills to develop a single dashboard to give the customer a total overview of the plant health, thereby enabling them to take proactive actions and prevent failures well in time.
- Timken India has started its gearbox refurbishment facility at Raipur which is working at full capacity and is capable of undertaking refurbishment of mission critical high tonnage (8-15tn) gear boxes. MILTEC services also provide a bright future for Timken India in the steel industry.

Exhibit 88: Different services offered by bearing players

Particulars	SKF India	Timken India	FAG
Other services offered	Solutions encompassing, seals, mechatronics lubrication system, technical support, life cycle management, repairs, refurbishment & maintenance services, condition monitoring, engineering consultancy	MILLTEC services for 24/7 management of steel and aluminum mills, industrial gearboxes and bearings refurbishment, providing lubrication solutions like seals, grease, lubricants etc.	Replacement of part with service solutions, lubrication solutions, bearings repairs and refurbishment

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 89: Services segment revenue growth

YoY revenue growth of services segment (%)	CY11/ FY12	CY12/ FY13	CY13/ FY14	CY14/ FY15
SKF India	21.15	6.88	5.46	2.74
Timken India	73.13	(8.75)	(7.04)	6.21

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 90: Share of services segment revenue

Share of services segment revenue (%)	CY11/ FY12	CY12/ FY13	CY13/ FY14	CY14/ FY15
SKF India	0.75	0.87	0.90	0.87
Timken India	4.09	4.50	4.00	3.29
FAG	0.05	0.20	0.12	0.20

Source: Company, Nirmal Bang Institutional Equities Research

Bearing – Types, attributes, trends, technology, raw materials, manufacturing process

Bearings are 'essential items' required to reduce or eliminate the friction between moving parts. The bearings are classified into two types - bimetal bearings and friction bearings.

Bimetal bearings are made up of two metals - steel and either aluminum alloy or lead base alloy or copper coating. There is a groove through which oil is passed under high pressure and that oil creates a paste or a oil film which does not allow the surface of the shaft which is rotating to get in touch with the inner surface of the bimetallic round strip called bearing. Full-round strip is called bush and half-round strip is called bimetal bearing. Bimetal bearings find application in crankshaft.

Friction bearings can be classified based on the rolling element used in bearings into basic bearing family categories like deep groove ball bearings, tapered roller bearings, cylindrical roller bearings, spherical roller bearings, needle roller bearings etc. and other special bearings for special applications.

Ball bearings are the most widely used bearings, constituting a significant segment of the market followed by tapered roller bearings.

Roller bearings (tapered/cylindrical/spherical) have only linear movement.

Tapered roller bearing has a higher area of contact and hence has a higher load-bearing capacity. Tapered roller bearings are designed to handle both thrust and radial loads on rotating shafts, and are used to reduce friction where shafts, gears or wheels are in operation. Typical end-use industries include construction, metals and mining, paper mills, commercial trucks and power generation units.

There are a few industries in which non-metal bearings are used which are ceramic or plastic bearings. For example, in the food and beverage sector, plastic bearings are used, given the corrosion problem. The industry also uses food grade grease and seals. Ceramic bearings are used in an abrasive environment, but in no way these non-metal bearings will replace metal bearings.

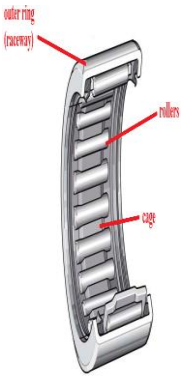
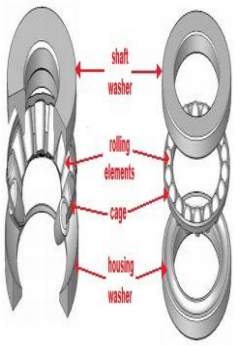
Important attribute of a good quality bearing is that it can withstand combustion heat, torque, RPM and load of all types.

Exhibit 91: Bearing types, applications, players and market size

Bearing type	Applications	Players	Largest Player with market share	Market size (Rsbn)
Deep groove ball bearing	Use in automobile for wheel and axle applications	SKF India, FAG, ABC, NEI	SKF India - 45%	43.5
Spherical roller bearing	Automobile suspension, drive shaft heavy machinery, gear boxes, railways	SKF India, FAG, NEI	FAG - 40%	6.09
Cylindrical roller bearing	Machine tools, transmission, wheel set for railways, pumps, compressors	NRB, SKF India, FAG, NEI	FAG - 40%	11.31
Needle roller bearing	Niche application in engine, gearbox, steering assembly, power transmission	NRB Bearings, INA, SKF India	NRB Bearings - 70%	8.7
Tapered roller bearing	Front wheel, differential & pinion configuration machine tools, spindles, construction, metal	Timken India, SKF India, FAG, ABC, NEI	Timken India - 45%	17.4
Thrust roller bearing	Classifiers, extruders, pulp refineries machine tools	SKF India, FAG, Timken India	-	NA

Source: Industry, Nirmal Bang Institutional Equities Research

Exhibit 92: Bearing types

Deep groove ball bearing	Tapered roller bearing	Spherical roller bearing	Cylindrical roller bearing	Needle roller bearing	Thrust bearing
					

Source: Industry, Nirmal Bang Institutional Equities Research

Important attributes of bearings

High rigidity, light weight, low space requirement, capacity to handle extreme load, longer nominal rating life, less friction, lower bearing temperature, ability to operate at high speed, and low vibration and noise are the important attributes of bearings.

General information about bearings

- There are four important factors in the manufacture of bearings. Quality raw materials, proper heat treatment, final finishing or grinding and adhering to the set quality parameters.
- Broadly there are four parts of bearings -inner ring, outer ring, rolling element and retainer. Retainer is used to keep rolling elements at equal distance. These parts are manufactured separately with accuracy and then assembled after detailed inspection.
- Lack of proper lubrication can reduce the life of a bearing by up to 50% and around 30% of premature failures in mechanical equipment are caused by poor or inadequate lubrication.
- Theoretical life of a bearing is infinite, but temperature is one of the important factors which determine the life of the bearings.
- On a thumb rule basis, the average value of bearings per vehicle (including two-wheelers, CVs, PVs, off the road)ranges from1.25%-1.50% of the price of the vehicles depending on the sophistication of the technology used in making the vehicle. For a two-wheeler it is up to 1% and for higher-end CV and PV it is ~ 1.50%. The number of bearings required per two-wheeler are 15-20 depending on the model and technology. In terms of value, it is in the range of over Rs500-Rs750 per two-wheeler. We have been given to understand by industry experts that for a CV, the estimated total amount of bearings required in value terms ranges from Rs30,000-Rs80,000. (CV requires four to eight sets of bearings. Each set costs Rs8,000 - Rs10,000).
- As per the latest presentation by Timken Co based in the US, the life-time opportunity for bearings of a 100 freight wagon rake is US$800,000. The life of freight wagon is assumed at 35 years and bearing life at 5 years. Therefore, there will be seven replacement cycles for bearings. This translates into an opportunity of US$1,143 per wagon per replacement cycle of five years. At an exchange rate of Rs65/1US$, it works out to be Rs74,200 per wagon per replacement cycle of five years. Hence, we can assume that the opportunity is in the range of Rs 70,000-Rs80,000 per wagon per replacement cycle of five years.
- As a lot of thrust is given on increasing the speed and axle load capacity of freight and passenger rolling stock, the bearings required have to be more advanced in terms of technology. Consequently, the average cost per bearing to go up significantly.
- Bearings come in thousands of sizes. The large size category of bearings is primarily used in industrial applications. Bearing size starts from 10mm up to few meters. In India, SKF AB, Timken Co and FAG-Schaeffler AG manufacture these large-sized industrial bearings at unlisted wholly-owned subsidiaries of their respective parents. FAG can manufacture bearings with outside diameter as large as -1 meter.

- Bearings are designed to have smaller dimensions than before, while supporting higher speeds and loads and thus constantly reduce parasitic losses.
- Bearing is a very high-precision product. The cost of the bearing depends on how accurately it gets manufactured. Therefore, in the entire costing of bearing around 30%-50% belongs to accuracy or quality part of bearing.
- The important parameter of bearing manufacture is boundary dimensions. There are a few standardised bearings (e.g. bearing code 6,210) having same dimensions globally. The manufacturer has to control the tolerance within the limit of few microns (1 micron is 1000th part of 1 millimeter). The other parameter is internal accuracy. It simply means maintaining the roundness of the bearing within tolerance of a few microns while it is rotating.
- Smaller companies are not going through all the requirements of quality checks and do not invest enough in the equipment to manufacture a precise product. However, multinational companies do. The bearing company has to do equal amount of investment in quality management process and equipment.
- Local manufacturers do not get pricing at par with leading multinational players despite the former offering more or less than par quality arguably. The perception of clients about local bearing manufacturers is that the cost or prices quoted by the Indian manufacturer - even though he is producing a bearing of comparable quality - should be at least 40% lower than the price of bearing of a multinational player. As a result, local manufacturers do not get an attractive price from clients.
- Various types of bearings are required in one automotive or machinery, depending on the application. For RPM (revolution per minute)-focused applications, ball bearings are used and where higher load carrying is required, roller bearings like tapered, needle, cylindrical (where angular load is there) or spherical bearing is used. Tapered roller bearings are designed to handle both thrust and radial loads on rotating shafts, and are used to reduce friction where shafts, gears or wheels are in operation.
- For example, for a car running at a speed of 100km/hr, the wheels might be running at different or higher speed, say around 250 km/hr. The RPM of gear box is different. The load is also different at different angles. Therefore, different types of bearings are required for wheel, gear box etc. as at some parts or applications RPM is important and at some parts load carrying capacity is important. Hence, the use of a specific type of bearing depends upon the design of machinery.
- Angular ball bearings and tapered roller bearings are used where there is angular load. For handling radial load, a simple ball bearing is used while thrust bearing is used for thrust load.
- Surface finish plays a vital role in reducing the friction where the rolling element comes in contact of inner race and outer race. The machinery required for quality check or improving the smoothness of surface has improved, which in turn increased the quality of the bearing. Thus, the quality of abrasives improved tremendously which increased the smoothness of surface finish.

- Bearing manufacturers are also subject to the risk of liability arising out of product failure. However, in general, it has been observed that the product failure is not necessarily because of sub-standard quality of bearing. It may be on account of design fault or bearing material fault or wrong type of bearing used for the application. Suppose an OEM is using the new braking system. Then there may be: a) Fault in the design of braking, or b) Use of sub-standard material in manufacturing the braking system, or c) Locking happening which is not anticipated, or d) Sudden rise or reduction in temperature etc. These factors adversely impact braking system performance, resulting in vehicle recall. It is not necessarily on account of bearing failure. For example, if there is not much radial or thrust load and the OEM has used tapered roller bearing for that application, then that system may get failed. This doesn't mean that the quality of bearing is inferior. It is the application of the bearing that went wrong. The wrong type of bearing was selected for that application which is not suitable. Hence, most of the times its design or raw material issue and not the quality of spare part issue. Many Europe and US-based OEMs use parameters which may not suitable for Indian conditions, especially in case of rubber parts like bushes etc.

Trend in automotive bearing technology and other aspects

- The bearings are also getting more sophisticated. The conventional solution featuring two individual bearings was replaced with a compact double row angular contact bearing with integrated seals. That was the evolution of **first generation wheel bearings**. Other wheel components such as knuckles and hub were then integrated with bearings, leading to development of **second generation bearings**. Currently, **third generation bearings** are in use. These bearings have integrated flanges, built-in ABS sensors with integration of magnetic encoder making the bearing capable of sensing the speed of the front wheel, effective sealing and facilitate optimised mounting which eliminates adverse influence because of manual errors. It offers a significant reduction in weight along with providing high-quality signal generation and transmission and thus contributes to reduction in fuel usage and emission.
- Advance generation bearings means manufacturers are trying to reduce the friction further by improving surface smoothness. Improvement in heat treatment methods improves the metal's stress carrying capacity which in turn increases the life of the bearing.
- Future technology in industry segment will be different. More and more machines are being equipped with intelligent functions for communicating with the external environment enabling them to function ever more precisely, efficiently and reliably.
- On automotive front, OEMs are moving towards tapered roller bearings in a big way and many of them towards the higher end.
- With the advent of ABS and Hub Grid solutions there will be requirement for sensor bearings. Sensor bearing unit integrates sensor, impulse ring and bearing and is a compact solution to record movement data for machine control. Data include number of revolutions, speed, direction of rotation and relative position as well as acceleration or deceleration. These bearings also capture temperature and vibration data to monitor bearing and wheel condition. These intelligent bearings are now in operation worldwide, providing high-quality signal generation and transmission. What makes this solution unique is that the sensor also can send a vibration signal to an onboard processor to build a history of component condition and warn of an impending bearing or wheel problem or a derailment condition.
- Bearings are now becoming more rigid, light in weight and need low space. These bearings can handle high loads, operate at high speed.They can handle high radial load and operate at high speeds with reasonable vibrations and noise.
- Sensor signals from bearing units will be used for anti-skid brake system, automatic train control and for security system of the doors.

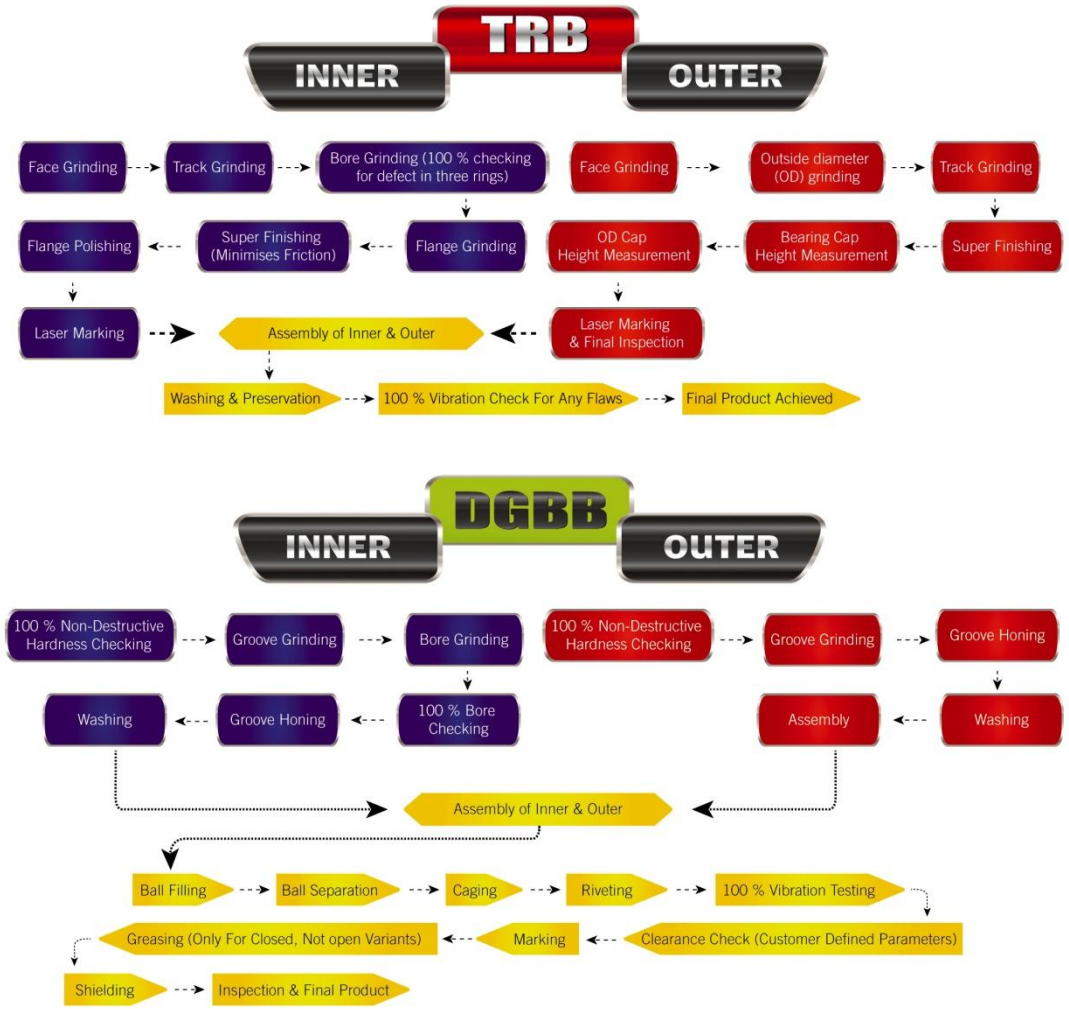
Various aspects of bearing manufacturing and its distribution

Broadly, the manufacture of a bearing has three main parts – heat treatment, machining/grinding and then assembling. There are at least four parts of any bearing – inner case, outer case, rolling element and retainer.

- The heat treatment releases stresses in the metal part. The structure also gets compacted or allows the metal part to get its desired shape. It helps to manufacture bearing within tolerance limit. The temperature required is between 650 degree Celsius to 1,200 degree Celsius.
- After heat treatment it goes through a grinding process followed by polishing. Both these processes happen using abrasives. This process helps improve RA (roughness average) value. RA gives a good general description of height variations on the surface. The objective of improving RA value from the level of 0.06 micro-inches to 0.04 micro-inches is to reduce the friction to practically zero.
- Steel and alloy steel form the basic materials for the manufacture of bearings and account for almost 45% of total costs. However, for local manufacturers it is in the range of 55%-60%. This difference is on account of the global reach of multinational companies. The metal used for manufacturing bearing is of SAE52100 standard. (Society of Automotive Engineering) or of EN31 series. This is steel with 1% carbon and 1.4% per cent chromium used for grinding media. The other equivalent standards for steel for bearing manufacturing are BS 970:1991, German DIN100CR6 etc. However, SAE52100 is more precise than EN31. These grades are manufactured in India and are also imported as well. The prices of these special alloys steel have come down by 10%-12% in the past one year. However, the fall was not as steep as the fall in iron ore and other steel prices because there are some other commodities whose prices are not declining like nickel and molybdenum, the exotic metals which go into making of bearing steel.

- Most multinational bearing companies have reduced their dependence on imported raw materials and have indigenised to a larger extent. These companies have developed local suppliers of quality steel which is the main raw material. The proportion of imported raw material and components in total raw material and components costs has significantly gone down since CY10/FY10 in case of SKF India and Timken India. In the case of NRB Bearings, it remains flat and in case of FAG, on the contrary, it has increased.
- Moreover, Indian government has imposed anti-dumping and safeguard duty of 20% each on bearing category steel imports in India in August 2014. The safeguard duty has reduced to 10% in June 2015. However, there is no pass-through of any raw material costs in OEM business. The bearing manufacturer has to negotiate it every time.
- Quality certifications and techniques like TPM (Total Productivity Management), TQM (Total Quality Management) play a big role in getting selected for supplying bearings to OEMs as they endorse the quality of manufacturing process.
- There is also the need for extensive domestic standards which can be applied equally to imports and prevent the surge in low quality and unsafe products.
- The life of a bearing deviates in OEM fitment and in after-market fitment mainly because of fitment conditions at OEMs and in the after-market segment. The bearing manufactured through proper manufacturing process has surely more potential to withstand extreme conditions than the bearing which has not been manufactured through a high quality process For the first three years, every manufacturer's bearing (industrial bearing) looks the same. After three years only it starts making noise and there is high rate of failure etc.
- The quality of machinery and quality of manpower are other criterions.
- Multinational companies, in addition to their own manufacturing facility, get many parts of bearings manufactured by vendors.
- The commission rates offered by local manufacturers are higher than that of branded multinational players. The general margin range for distribution channel in after-market segment is 20%-35%. The manufacturing cost difference between local manufacturers and multinational players is around 35%-40%. Local manufacturers have lower cost of production than their multinational peers. However, the price difference is in excess of 40%-50%. Overheads of branded multinational companies are higher than that of local manufacturers.

Exhibit 93: Manufacturing process



Source:autotechreview.com

Key risks

- Key threat to the industry emanates from volatile commodity prices. Steel and alloy steel form the basic raw materials for the manufacture of bearings and constitute the single-largest component of bearing costs.
- As developed markets like US and in Europe remain under recessionary pressure, bearing manufacturers in China and South-East Asian countries use Indian market as a dumping ground. Cheap imports from these countries have shown a rising trend in recent years.
- Cheap low quality imports pose a major challenge to domestic bearing customers as well as producers. Many of these imported bearings are sold in the market as spurious bearings, taking advantage of the lack of awareness among customers, demand-supply gap and the pricing.
- Spurious bearing market size is as large as more than one-third the size of organised market. Ball bearings are the most widely counterfeit products and alone constitute 70% of total spurious bearing market.
- Countries are resorting to subsidising their export-oriented industries which may prove to be a big threat for domestic bearing industry.
- Multinational companies like SKF India, FAG and Timken India pay royalty, trade mark fees and other charges to their respective parents on manufactured products for utilising the technology, talent pool and other resources of parent company. These companies pay royalty at the rate of 3% and trademark charges are in the range of 1%-2% besides other charges for utilising human resources of parent at actual. These royalty agreements are open-ended and governed by transfer pricing mechanism. The outgo has increased. Though most of the companies have not increased these rates in the past three years, one cannot rule out the possibility in the light of increased use of advanced technology in manufacturing bearings in India.

Exhibit: Royalty and trademark fees as % revenue and YoY growth

Exhibit 94: Royalty, trademark fee and other charges as % of revenue

Royalty and trademark fee as a % of revenue	CY11/ FY12	CY12/ FY13	CY13/ FY14	CY14/ FY15
SKF India	0.6	2.1	2.8	2.8
Timken India	4.0	4.0	4.1	3.1
FAG	1.6	1.6	1.6	1.6

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 95: Royalty, trademark fee and other charges YoY growth

Royalty and trademark fee YoY growth (%)	CY11/ FY12	CY12/ FY13	CY13/ FY14	CY14/ FY15
SKF India	22.4	233.3	35.1	5.4
Timken India	85.3	(16.0)	5.1	(0.2)
FAG	14.0	16.0	(7.3)	16.0

Source: Company, Nirmal Bang Institutional Equities Research

- Parents of leading multinational companies have unlisted subsidiaries in India which may adversely impact the listed entity on account of cannibalisation of products and diversion of high-margin and potential business to them.
- Slower-than-expected economic growth.
- A few Japanese bearing manufacturers have set up plants in India. Given their strong relationships with Japanese and Korean automotive OEMs, there may be increase in competition in this space.

Exhibit 96: Entry of new global players is mainly in automotive segment

Company	Plant location	Commencement of operations	Targeted segment
NTN Bearings India	Kancheepuram, Tamil Nadu	February, 2005	Automotive
Nachi KG Technology	Neemrana, Rajsthan	July, 2013	Automotive
NSK-ABC	Kancheepuram, Tamil Nadu	February, 2008	Automotive
JTEKT-Koyo	Bawal, Haryana	November, 2012	Automotive

Source: Industry, Nirmal Bang Institutional Equities Research

Company Section

Timken India

4 January 2016

Reuters: TMKN.BO; Bloomberg: TIMK IN

Initiating Coverage

Set For High-octane Growth

Timken India (TIL), the leading manufacturer of TRBs (tapered roller bearings) with an overall market share of 10% and 45% in TRB segment, is set for high-octane growth compared to its peers on account of: A) Revival in demand for commercial vehicles or CVs mainly medium and heavy commercial vehicles or MHCVs, B) Thrust on exports, likely improvement in capacity utilisation across user industry, railway business opportunity led by spurt in rolling stock addition/up-gradation, refurbishment etc, and C) Expansion of metro rail network to more cities, high-speed railway corridors, Dedicated Freight Corridor (DFC) project etc. Timken India has the distinction of being the only listed indigenous manufacturer of freight application bearings for railways. Apart from bearings, Timken India is determined to diversify into areas like mission critical higher capacity industrial gearbox refurbishment, lubrication, maintenance of rolling mills in steel plant etc. We expect a revenue CAGR of 17% over FY15-FY18E, given the dominant market share in high-growth railway and MHCV segments. PAT CAGR is likely at 16%. We expect margins to remain at an elevated level witnessed in FY15, given the indigenisation of raw materials and thrust on exports led by parent company's strategy of sourcing products from low-cost destinations globally. Timken India's return ratios are better than its peers. We have assigned Buy rating to the stock with a target price of Rs650, which discounts FY18E EPS of Rs18.6 by 35x.

At top position to grab business from railways: The opportunity from railways is expected to grow from Rs10bn per annum at higher than previous growth rate owing to requirement of higher safety, speed and larger load-carrying capacity. Moreover, DFC and metro rail projects have the potential to offer Rs2bn-Rs5bn and Rs500mn per annum opportunity, respectively, for bearing players initially. Timken India is the largest bearing vendor of railways. Moreover, the company is technology partner for railways in selecting the bearings for DFC project.

Anticipated revival in CV segment to boost revenue growth: CV volume is estimated to post a CAGR of 16% over FY15-FY18E. Timken India is the major player in CV mainly in MHCV segment. We expect Timken India's revenue to clock a CAGR of 17% over the same period.

Exports, margins and return ratios to remain at elevated levels: We expect exports to clock a double-digit CAGR of 18% over FY15-FY18E. EBITDA and PAT margins are expected to remain at elevated levels at 14% and 8.5%, respectively, given the raw material cost rationalisation efforts of Timken India. RoE and RoCE are expected at 20.6% and 22%, respectively, led by gradual improvement in PAT margin and total asset turnover.

Y/E March (Rsmn)	FY14	FY15	FY16E	FY17E	FY18E
Revenue	7,201	9,290	11,071	12,929	14,926
YoY (%)	*4.6*	*29.0*	*19.2*	*16.8*	*15.5*
EBITDA	716	1,337	1,519	1,828	2,144
EBITDA (%)	*9.9*	*14.4*	*13.7*	*14.1*	*14.4*
PAT	448	807	884	1,056	1,262
YoY (%)	*1.2*	*80.3*	*9.6*	*19.4*	*19.5*
FDEPS (Rs)	6.6	11.9	13.0	15.5	18.6
RoE (%)	*12.4*	*19.7*	*19.0*	*19.9*	*20.6*
RoIC (%)	*11.6*	*20.8*	*19.2*	*20.3*	*21.4*
P/E (x)	83.6	46.3	42.3	35.4	29.6
EV/EBITDA (X)	52.0	27.8	24.7	20.5	17.3

Source: Company, Nirmal Bang Institutional Equities Research

BUY

Sector: Industrial Goods

CMP: Rs550

Target Price: Rs650

Upside: 18%

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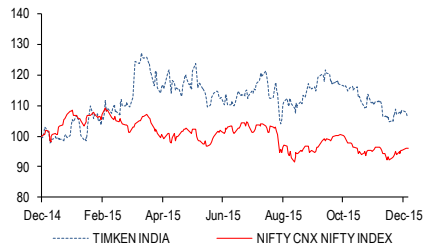
Key Data

Current Shares O/S (mn)	68.0
Market Cap (Rsbn/US$mn)	37.2/563.6
52 Wk High /Low (Rs)	669/493
Daily Volume (3M NSE Avg.)	17,715

Shareholding (%)	4QFY15	1QFY16	2QFY16
Promoter	75.0	75.0	75.0
FII	1.3	1.5	1.6
DII	9.6	9.4	9.4
Others	14.1	14.1	14.0

One-Year Indexed Stock Performance

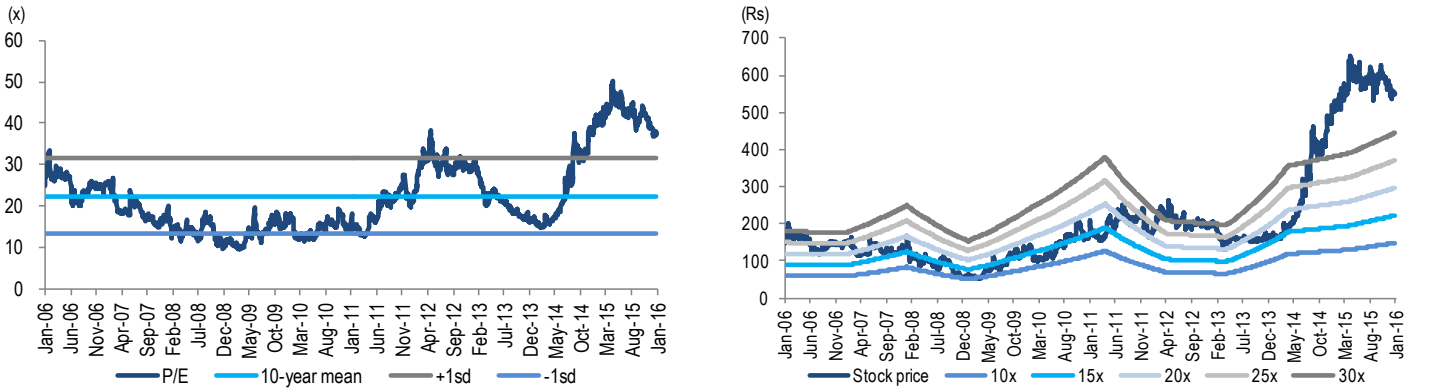


Price Performance (%)

	1 M	6 M	1 Yr
Timken India	(4.2)	(5.2)	7.1
Nifty Index	(0.2)	(5.4)	(4.)

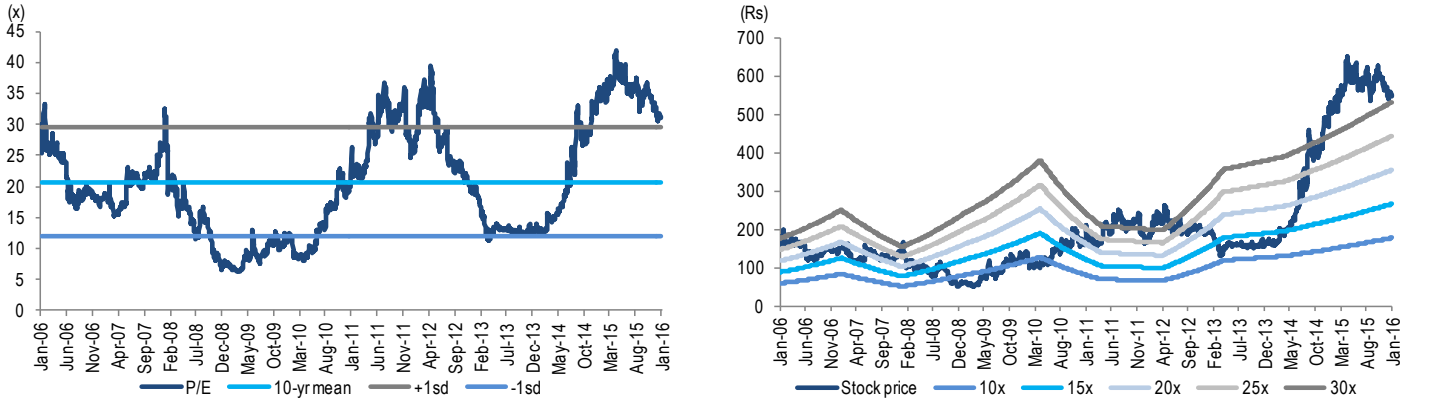
Source: Bloomberg

Exhibit 1: One year forward P/E chart



Source: Nirmal Bang Institutional Equities Research

Exhibit 2: Two year forward P/E chart



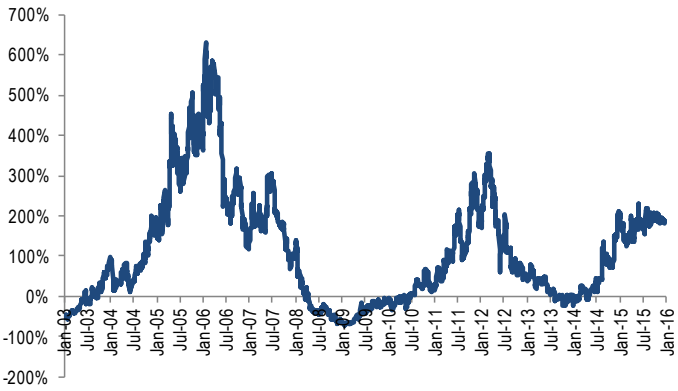
Source: Nirmal Bang Institutional Equities Research

Exhibit 3: Average PE

Particulars	1 year forward			2 year forward		
(x)	3 year average PE	5 year average PE	10 year average PE	3 year average PE	5 year average PE	10 year average PE
Timken India	29.3	27.4	22.3	23.6	25.3	20.6

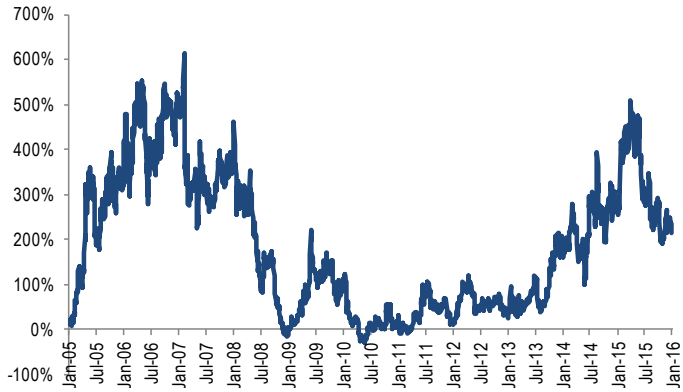
Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 4: Three year rolling return



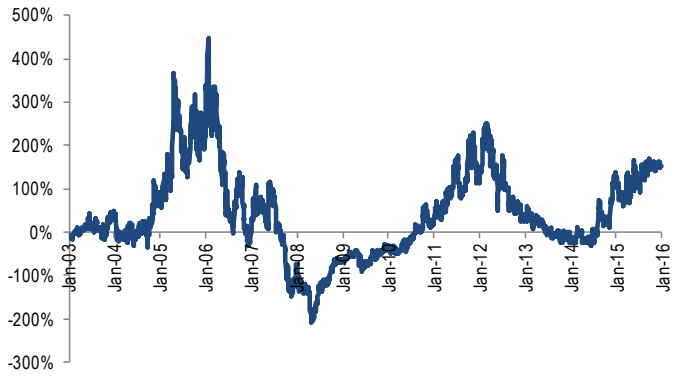
Source: Nirmal Bang Institutional Equities Research

Exhibit 5: Five year rolling return



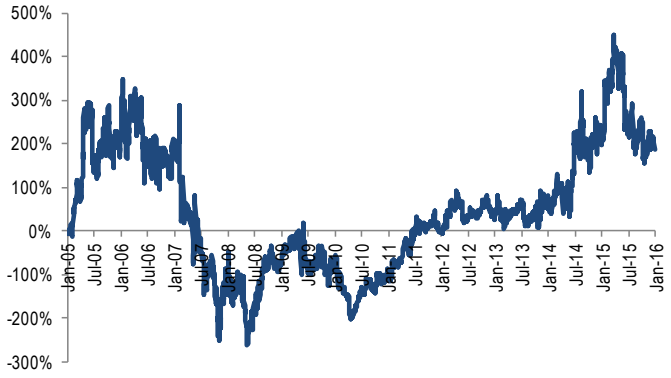
Source: Nirmal Bang Institutional Equities Research

Exhibit 6: Three year Alpha



Source: Nirmal Bang Institutional Equities Research

Exhibit 7: Five year Alpha



Source: Nirmal Bang Institutional Equities Research

Investment Rationale

Timken India is one of the largest manufacturers of TRBs with a dominant share in railway segment

Timken India is the leading TRB manufacturer in India with no presence in ball bearing segment.The company's client segments include OEMs of CVs mainly MHCVs, tractors, cement, power, railways and metal-mainly steel manufacturers etc. The company also has a presence in after-market segment. Timken India commands ~10% market share in overall domestic bearing market and ~45% in TRB space. The company is the largest player in second-largest domestic bearing consuming sector - railways (market size - Rs8bn-Rs10bn per annum) with around 25% share.

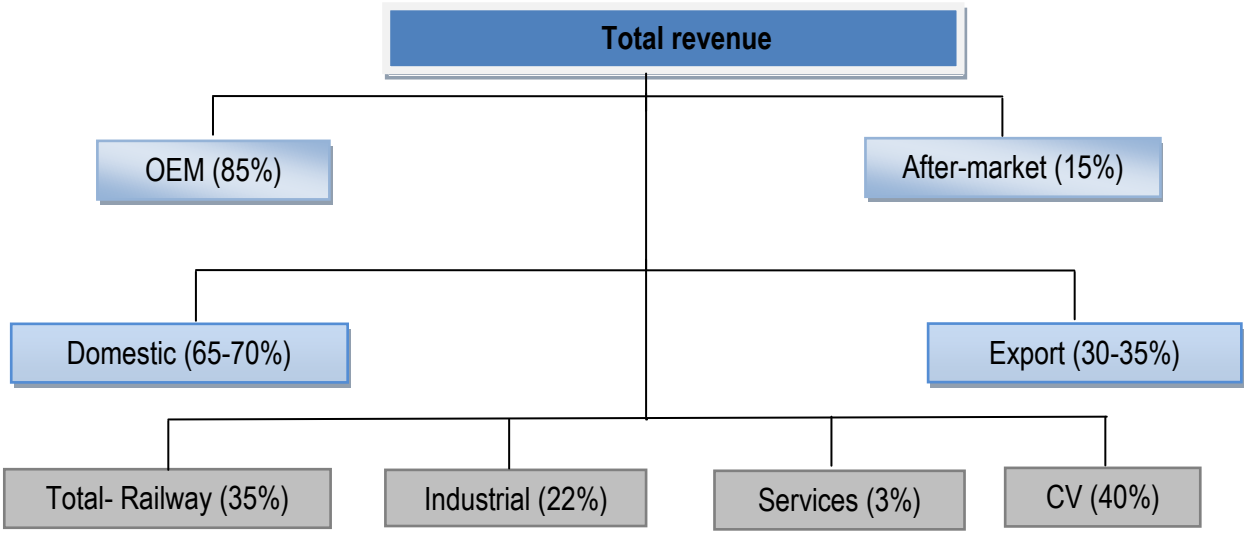
Timken India gets the technology from its parent and pays royalty (3%) and trademark fees (1%) on the goods manufactured in India. The company imports a lot of components and semi-finished products along with finished products. Traded goods form ~35% of total net revenue. The company is also importing bearings like spherical bearings and cylindrical bearings apart from TRBs which go into different applications of the process industry.

Timken India recently started focusing on allied products and services following the global strategy of the group to grow its business beyond bearings. Production of TRBs for CVs, railways and tractors is being carried out at its only factory in Jamshedpur, in addition to mission critical gear maintenance service work at Raipur facility. The company is embarking on capex of Rs1.35bn which will be completed by July 2016. The size of capex (42% addition to gross block of FY15) signals bright business prospects. This will allow Timken India to improve localisation of various products and cut the share of low-margin traded goods.

Timken India has revenue share of 30%-35% from exports, largest among its peers. Exports clocked a CAGR of 21% over CY07-FY15 against a 15% CAGR registered by total net revenue over the same period. The company's technological competence and lean cost structure coupled with depreciation in INR versus USD drives exports.

Timken India is in niche segments in domestic market like: A) Railway freight application where there is less competition as only National Engineering Industry (NEI) is noteworthy player in terms of business share, B) Higher tonnage MHCVs, and C) New areas like repair and refurbishment of mission critical higher tonnage gear boxes and large-sized bearings along with maintenance contracts of steel rolling mills. These areas along with sizable exports to parent company at an arm's length price mechanism keeps around 50% of Timken India's total net revenue immune to heavy competition.

Exhibit 8: Revenue break-up



Source: Company, Nirmal Bang Institutional Equities Research

Near-term business outlook is mixed, but long-term outlook appears promising

Our recent interaction with the management suggests that near-term outlook is mixed with a few sectors showing promising signs. Railways, metro rail and CV segments are showing signs of uptick. However, it cannot be construed as revival, as per the management. Core sectors like cement, steel and agriculture are still subdued on which the revival of CV and tractor segments hinges on. Erratic monsoon and higher inflation adversely impacted the demand for tractors in particular and rural demand in general.

Policy actions initiated by the government with respect to coal mine auction and resumption of stalled infrastructure projects have created a foundation for strong long-term growth going forward. Timken India is upbeat on service side opportunity in power sector, given the void in this segment. Thus, it will have more demand for bearings. TIL also launched new products last year to cater to this segment.

Timken India is market leader in niche applications, increasing offerings & expanding distribution

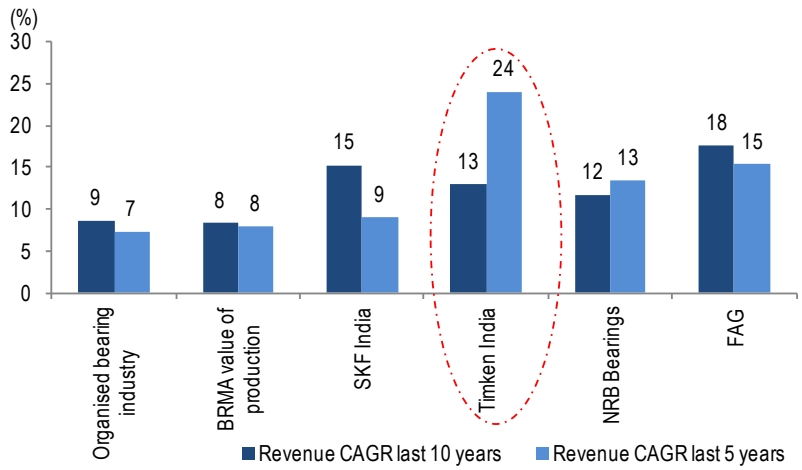
Timken India is leading manufacturer of TRBs in India. The company holds ~10% share in organised bearing market. However, in TRB type, Timken India commands ~45% share in domestic market. The company does not manufacture ball bearings in India and remains focused on TRBs. TRBs are designed to handle higher axial load and are used for shafts, wheeling (heavy haul) and gear applications. In CV segment, bearings are used in wheels, in differential and in pinion. Timken India is market leader in differential and pinion applications on heavy haul.

In line with the global strategy to look beyond bearings, Timken India is concentrating on expanding vistas. The company has started a few services like bearing and gear box refurbishment. It also provides MILLTEC services to various steel and aluminum roll shops. The company added various products like seals, grease, joints etc, as a part of global strategy. Timken India keeps on launching new products in its portfolio. Total products in its portfolio have now touched 2,500 from a mere 50 products when it started operations 25 years ago. In fact, in the past three years, the company expanded its product portfolio by 50%. The company has a wide network comprising 100 distributors in India and is planning to increase it to 150 shortly. However, it is well short of peers like SKF India and FAG which have 250 and 200 distributors, respectively.

Timken India revenue CAGR higher than peers in past five years and is likely to continue

Timken India's revenue CAGR over FY05-FY15 at 13% is more or less in line with peers and well ahead of organised bearing industry CAGR of ~9%. However, the tide has turned in favour of Timken India during the past five years where the company's revenue CAGR over CY09-FY15 was 24% against 7.5% of organised bearing industry, 9% of SKF India, 13% of NRB Bearings and 15% of FAG. This was mainly driven by a 26% CAGR in exports which now occupies a 36% share in revenue in FY15. We believe Timken India is in a sweet spot to capture opportunities coming from sectors where the company has a strong presence or largest market share. Railway sector is expected to offer large opportunities in the form of freight car expansion drive, setting up of new locomotive plants, expansion of metro rail network, increase in high-speed passenger train network, DFC project etc. In automotive space, the shift towards higher tonnage vehicles and mileage warranty extension by OEMs will give a boost to TRBs in which Timken India is the leader. Moreover, the company has added a few more non-bearing services and products like gear box repair, lubrication service, condition monitoring system, shaft etc. Thrust on exports in the backdrop of low-cost manufacturing and a weak INR will provide further impetus.

Exhibit 9: In past five years Timken India has outperformed the industry and peers

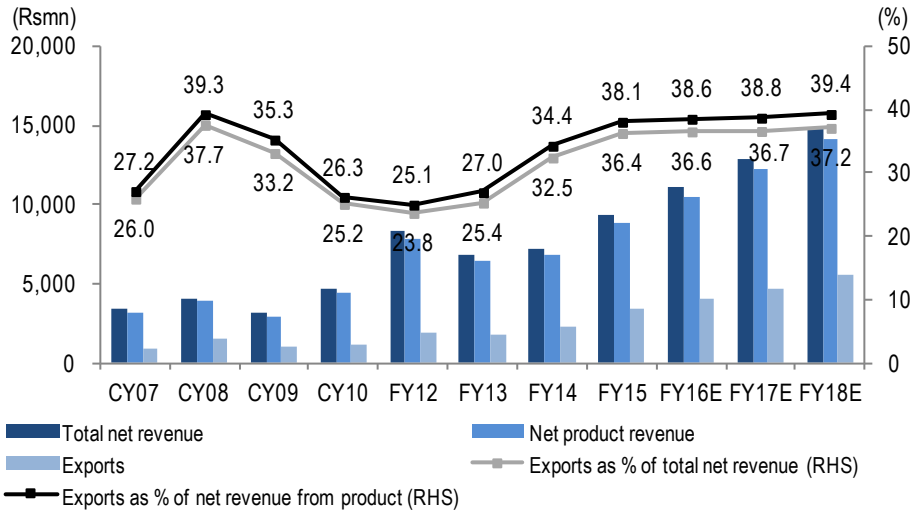


Source: Company, Nirmal Bang Institutional Equities Research

Export share in revenue expected to be high and Timken India to remain net exporter

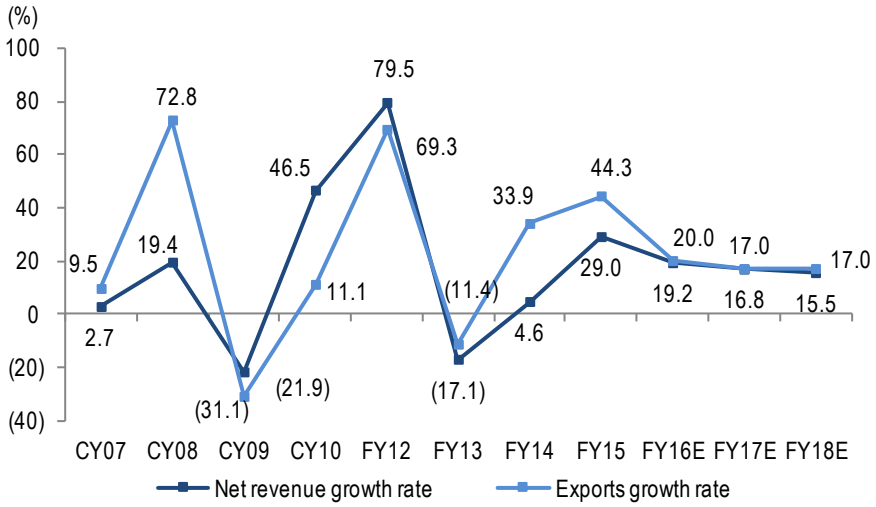
Export contribution to net product revenue and total net revenue of Timken India improved from 27% and 26%, respectively, in CY07 to 38% and 36%, respectively, in FY15. It is the highest compared to leading bearing players. Timken India exports bearings to CV and off-highway segments in North America and also for meeting railway application. Exports clocked a CAGR of 21% over CY07-FY15. This was higher than 15% of total net revenue CAGR over the same period. In addition to demand surge for the company products overseas, INR depreciation in CY07-FY15 also contributed to export growth. Timken worldwide follows the principle - one product one quality. This augurs well for a low-cost destination like India given the fact that the quality of Timken India products is world-class. Export revenue allows the company to keep its assets busy even during a lean period in domestic market.

Exhibit 10: Exports expected to continue growing in absolute as well as relative terms



Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 11: Net revenue and export growth rates

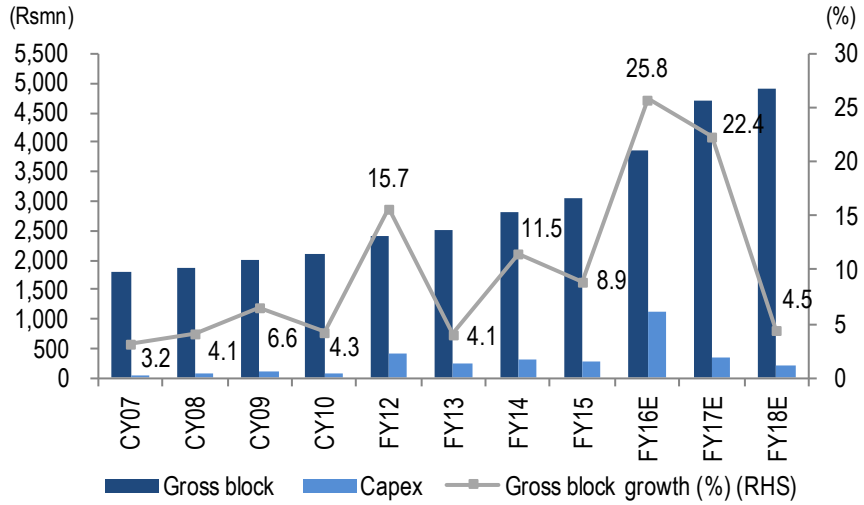


Source: Company, Nirmal Bang Institutional Equities Research

Capex plan (42% likely addition to gross block) at Jamshedpur unit indicates strong business traction

Timken India has been modest in its capex over CY07-FY15 wherein its gross block registered a modest CAGR of 8% against total net revenue CAGR of 15%. This clearly reflects the conservative approach of the company. However, expectations of robust export growth and likely revival in India's economy prompted Timken India to embark on large capex (likely increase in gross block by 42%) at Jamshedpur facility for large-sized TRBs used in railways and CVs. The expansion is at early stage and is likely to be completed by July 2016. Most of the capex will be funded from strong internal accruals. Timken India had net cash flow from operations amounting to Rs490mn in FY15.

Exhibit 12: Capex expected to be robust till FY17



Source: Company, Nirmal Bang Institutional Equities Research

Timken group's rationale to grow beyond bearings is to become an end-to-end solution provider

The thought process behind going beyond bearing business is to tap the huge potential in allied products and services. Timken group aims to become a global power transmission and solutions company. The group wants to provide end-to-end services like refurbishment, repair services etc. to customers and not just sell products. The group wants to grow around the bearing space where its design skills, knowledge of material sciences, power transmission, and friction management can be exploited. The main principle is to protect and also grow the business. Hence, more is the growth beyond bearings, more is the dependence of customers on the group.

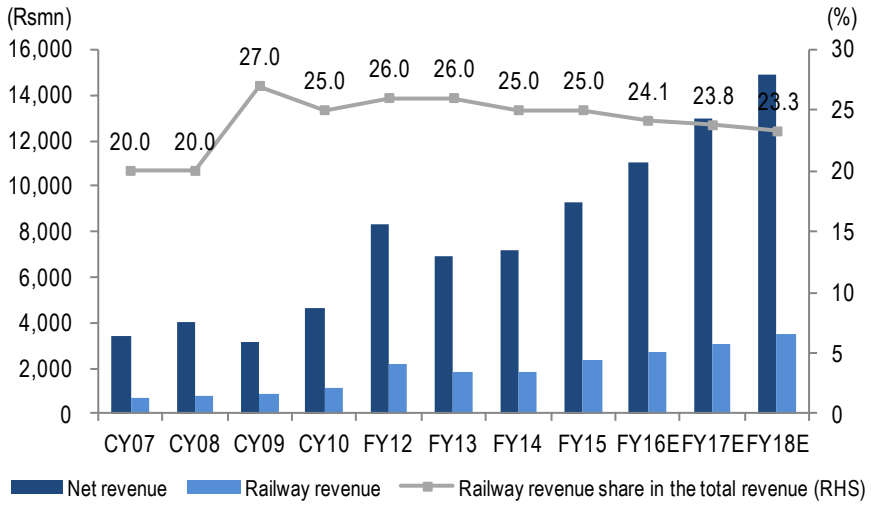
Timken India continues to remain the largest player in railway segment which is poised for higher growth

Timken India is the only listed indigenous company which manufactures TRBs for freight and high-speed passenger coach applications. The company does not face high competition in this space from major players barring NEI. Timken India, by virtue of its global leadership position in TRBs, enjoys the largest combined share of 45%-50% in freight application (60% of Rs8bn-Rs10bn domestic railway bearing market), locomotive and high-speed passenger coaches (Shatabdi/Rajdhani) application. Refurbishment of railway bearing is also one of the focus areas for the company. Locomotive and high-speed coaches are still niche areas which will witness expansion in opportunity size. Timken India is an official associate of Indian Railways in selecting the type and technology of bearings for its DFC project.

- High-speed passenger coaches, metro rail and DFC projects are big triggers for the company, given the increase in speed, heavy haul axle load and advancement in technology of TRBs.
- This will offer two-fold opportunities for Timken India – a) Increase the volume of bearings because of rolling stock expansion, and b) Rise in the price per bearing, given the latest technology.
- Further, normal passenger coaches will shift to TRBs from spherical or cylindrical roller bearings going forward, given operating parameters like average speed and average payload growth.
- Wagon procurement per annum planned at 21,000 units over FY16E-FY20E by Indian Railways and also passenger coach procurement per annum likely to go up from ~4,000 coaches currently to over 4,500 coaches per annum.

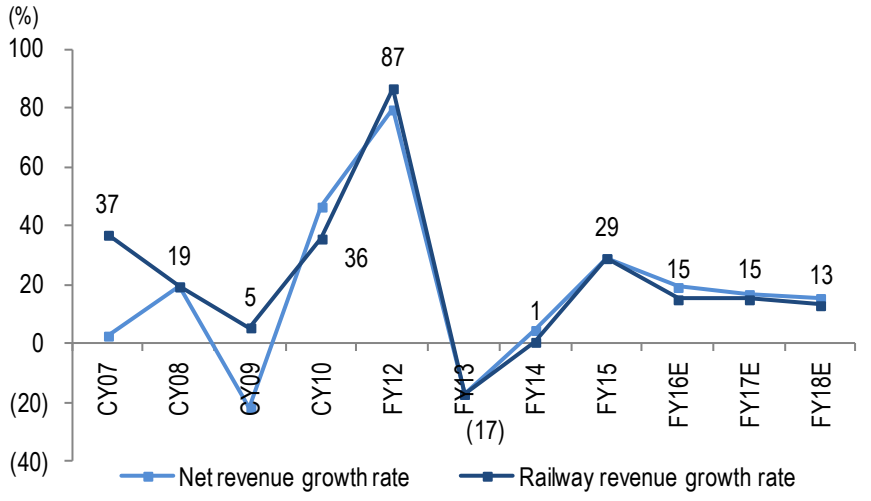
- Indian Railways has awarded a project to set up an electric locomotive factory recently to Alstom. The plant will be set up at Madhepura in Bihar. Timken India has been associated with Alstom for this project since the beginning. Similarly, the decision on diesel locomotive plant at Marhora in Bihar has gone in favour of GE. These two projects, once become fully operational, will expand the locomotive bearing market size by 200 locomotives per annum from 700 locomotives per annum currently.
- The annual market size of bearings for railway application is likely to grow at a much higher rate as compared to earlier period.
- In DFC project, freight wagons are going to be of heavy haul. The axle load capacity of freight wagons is estimated upwards of 32.5tn as against 22.9tn currently. This augurs well in expanding the TRB market as DFC project is estimated to offer a Rs2bn-Rs5bn per annum opportunity for bearing players from FY19.
- The current market size for bearings in metro rail segment is Rs400mn per annum. Timken India is currently supplying bearings to Alstom and BEML-Rotem joint venture. BEML-Rotem currently supplies coaches to Delhi, Bengaluru and Jaipur metro rail projects. There are almost 18 new metro rail projects at various stages of development. This will further expand the opportunity in the medium term.
- The domestic railway segment contributes around 25% to TIL's revenue and clocked a CAGR of 19% over CY07-FY15. On a higher base, we expect FY15-FY18E railway segment revenue CAGR in double-digits, at 14%.

Exhibit 13: Revenue from railway segment



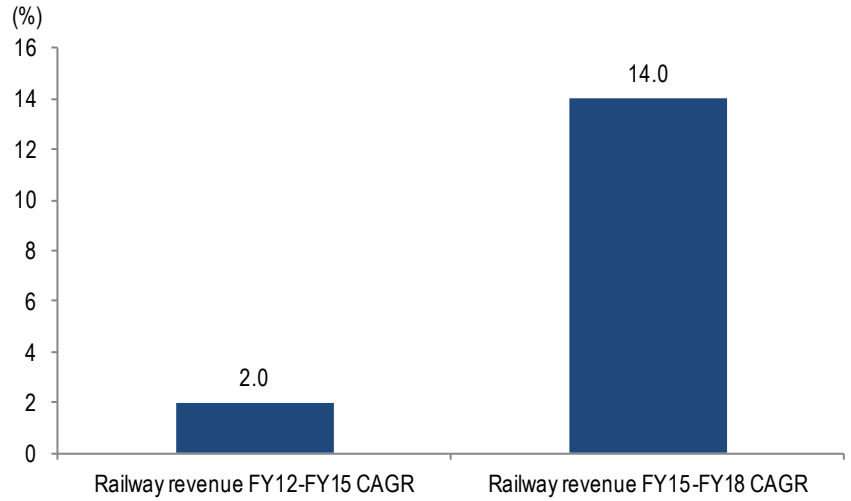
Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 14: Net revenue growth rate moves in tandem with railway revenue growth rate



Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 15: Railway revenue CAGR comparison for two periods



Source: Company, Nirmal Bang Institutional Equities Research

Automotive business

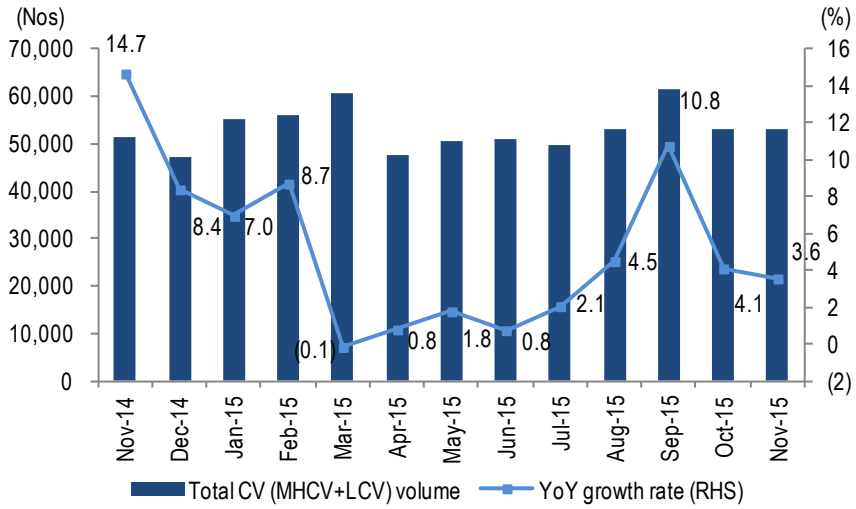
A play on CV mainly MHCV segment which has shown some signs of revival of late

Timken India is not present in ball bearing space which occupies ~50% of friction bearing market in India. However, Timken India is the largest player in TRBs. TRBs are mainly used for heavy load applications. In automotive segment, Timken India's target sub-segments are MHCV (medium and heavy commercial vehicle) and tractor segments. TRB is generally used for 8tn plus load. LCVs (light commercial vehicles) use ball bearings. Timken India has a dominant presence, with most automotive OEMs engaged in manufacturing MHCVs and tractors. Main clients include Ashok Leyland (nearly entire requirement), Tata Motors, Volvo-Eicher Commercial Vehicles, Dana Spicer, M&M (35%-40% of requirement for tractors, Scorpio, XUV 500 vehicles and other models) and tractor manufacturers like Escorts, John Deere and New Holland.

- India has Hub and Spoke model for transportation where MHCVs are used for transportation till Hub and LCVs are used for distribution from the Hub. Timken India is not present in commoditised LCV segment which uses ball bearings.
- MHCV segment registered a CAGR of 6% over FY03-FY15. However, higher tonnage (16.2tn-25.0tn and >25,0tn) categories clocked a higher CAGR of 11%, beating overall MHCV segment CAGR. Moreover, these higher tonnage categories' combined share in total CV volume has been in the range of 31%-56% over FY03-FY15. In the recent past, it increased from 43% in FY10 to 55% in FY15. This shift towards higher tonnage (multi-axle) vehicles augurs well for Timken India, given the fact that the volume and value of bearings per vehicle goes up.
- Tractor segment registered a CAGR of 19% over FY03-FY15. Higher tonnage (>35.2tn) tractor sub-segment posted a 57% CAGR over the same period. The near-term pressure on tractor segment is on account of erratic monsoon this year and rural slowdown. This segment may remain subdued for some more time.
- We have witnessed trivial revival in CV (MHCV+LCV) segment since the past few months. We believe that given the stability in freight movement and with high uptime requirement along with likely resumption of mining activity in the next few months, large fleet owners are planning to replace their aging fleet.
- Another important aspect is the mileage and component warranty which many CV OEMs are issuing to users. The bearings are now equipped with sensors and come with life-time warranty in some cases. Timken India is the leading player and its products are equipped with this technology which allows OEMs to offer fuel efficiency. This augurs well for the company. The company has been selling these products to Tata Motors – Prima range of CVs which offer up to 1mnkm warranty.
- Given the focus on better road infrastructure with toll, demurrage charges for break-down vehicles are quite huge. Hence, OEMs are likely to look at quality bearings.

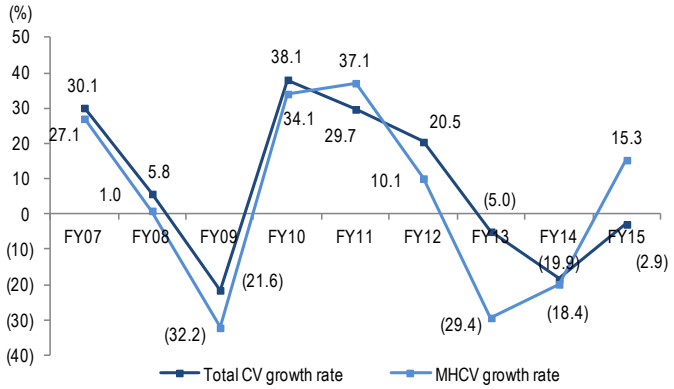
- Timken India also exports these bearings to North American market where fuel-efficient bearings have become mandatory, especially for heavy tonnage CVs.
- We expect the CV segment to clock a CAGR of 16% over FY15-FY18E and the tractor segment to witness a modest recovery from 2HFY17E.

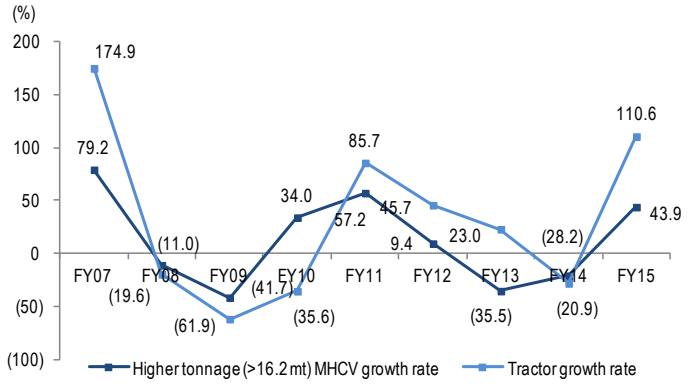
Exhibit 16: Monthly CV volume and growth rate



Source: Society of Indian Automobile Manufacturers or SIAM, Nirmal Bang Institutional Equities Research

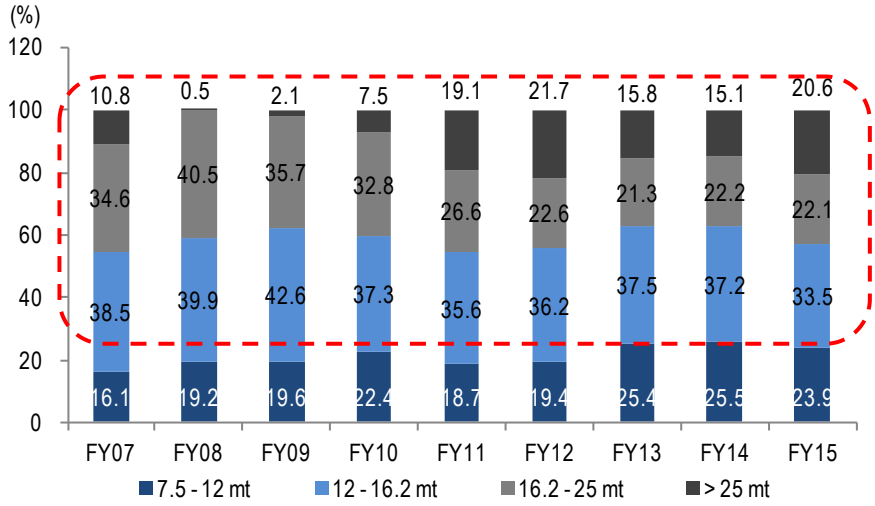
Exhibit 17: Total CV, MHCV, higher tonnage CV and tractor growth rates





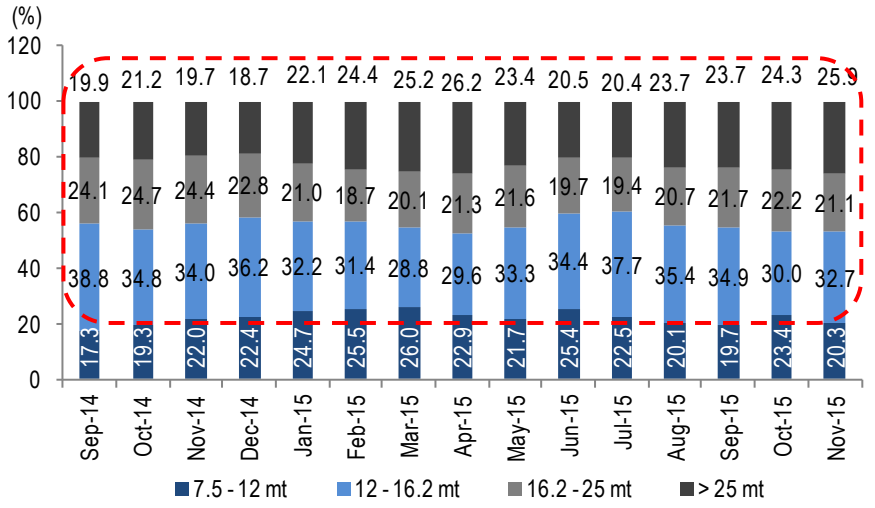
Source: SIAM, Nirmal Bang Institutional Equities Research

Exhibit 18: Composition of MHCV annual volume



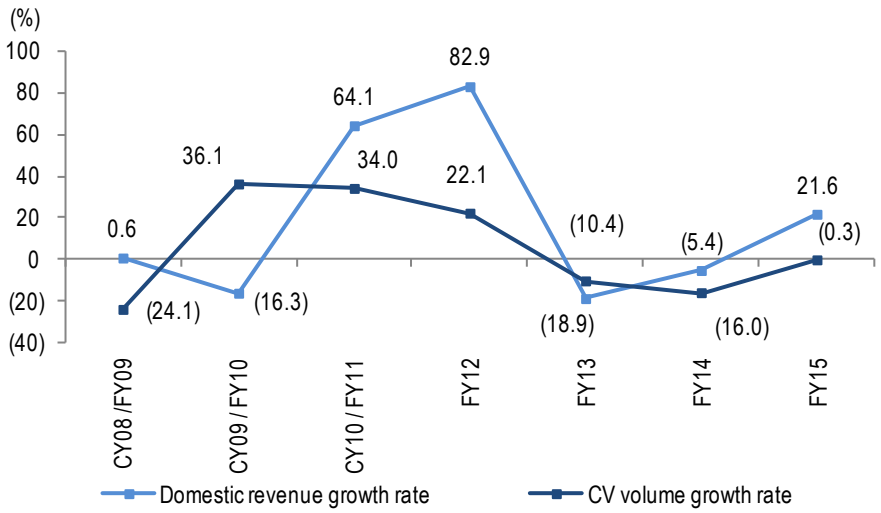
Source: SIAM, Nirmal Bang Institutional Equities Research

Exhibit 19: Composition of MHCV monthly volume



Source: SIAM, Nirmal Bang Institutional Equities Research

Exhibit 20: Domestic revenue growth rate versus CV volume growth rate



Source: Company, SIAM, Nirmal Bang Institutional Equities Research

Service revenue

Timken India determined to grow service revenue as estimated opportunity size is 10x that of bearing market

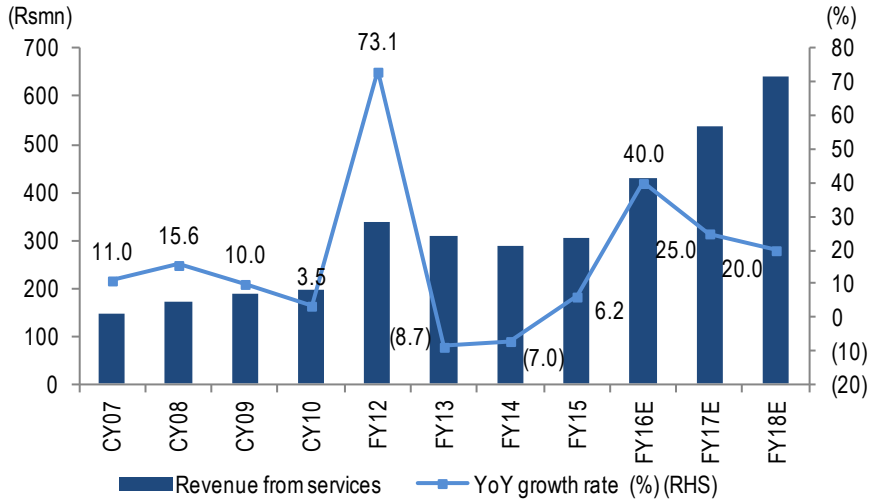
The parent company of Timken India made a series of acquisitions over the past few years with the objective of adding new revenue streams and looking beyond the bearing segment. The parent formalised a strategy to become solution provider for mechanical power transmissions as well. Timken India's management is also focusing on the same strategy in India.

The global market size for bearings is estimated atUS$55bn per annum while allied products and service opportunity size is likely to be 10x that of bearing market i.e. US$550bn per annum.

The product offerings from Timken India have significantly increased, given the acquisitions by its parent like Torrington, Drives and Philadelphia Gears etc. These new acquisitions strengthen the efforts as a leader in friction management and mechanical power transmission solutions. Timken India has now started offering products other than TRBs in India which includes seals, related parts, grease, lubricators, industrial bearing and gear boxes repair service, engine bearing, steering products and assemblies etc. The service offerings are designed to increase uptime and lower total cost of ownership for clients. TIL has expanded the number of service points as well.

- The current Indian market for TIL in service segment is estimated at Rs500mn. We have been given to understand that it is just the tip of an iceberg and could grow very fast. As mentioned earlier, the potential for this segment is estimated at 10x the bearing market size.
- Timken India set up industrial service plant at Raipur at a cost of Rs130mn in FY14 to ride on the offerings from Philadelphia Gears. The Raipur service plant is the first such Timken plant outside the US. This facility aims to cater to combined gear and bearings refurbishment service and focuses on industrial gearbox repair, general rebuilding and choke repair.
- The plant is strategically located in the hub of metal, cement; coal-fired power generation and mining industries and will support in growing its after-market penetration in these industries.
- The Raipur facility is capable of refurbishment of mission critical 2tn and 16tn gear boxes. Timken India recently installed high-technology machines for the first time in India to decode some bearings which can be sold or refurbished for oil and gas sector. The company has also exported a few gearboxes for cooling tower applications in the US.
- Timken India has started selling spherical and cylindrical roller bearings, condition monitoring systems, high- end joints to steel plants, operating critical grinding machines, special grease, gear refurbishment service and will soon start selling couplings as well.
- Onsite MILLTEC® programme provides round-the-clock management of a steel and aluminum mills' roll shops to minimise operational problems and downtime. This service includes assembling, disassembling, maintenance, repair, overhauling and other related activities in rolling mills at customer sites. In FY15, Timken India was associated with a total of 11 customer sites across the country. Currently, this market is served by few small players or the metal companies manage themselves in-house. However, the trend is moving towards third-party leading players for maintenance of roll shops.
- Clients include Tata Steel, JSW Steel, and Essar Steel, to name a few.
- Timken India is optimistic on service side opportunity in power sector, given the deficiency in this segment. Hence, it will start consuming more bearings. Timken India has introduced new products last year to meet this requirement.
- We expect service segment revenue to grow from 3.3% of total net revenue in FY15 to 4.3% by FY18E. In absolute terms it is estimated to grow from Rs306mn to Rs642mn over FY15-FY18E, entailing a CAGR of 28%. The business also has higher EBITDA margin profile in the range of 15%-20%.

Exhibit 21: Services revenue and growth rate



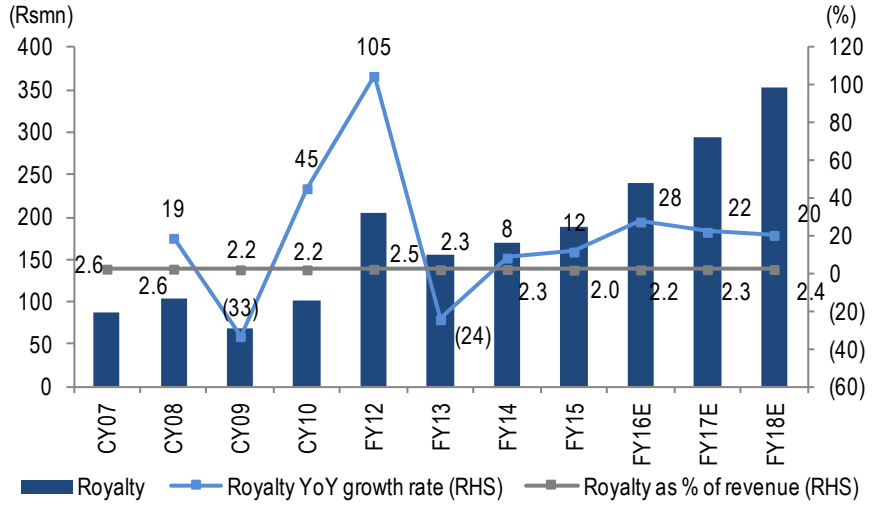
Source: Company, Nirmal Bang Institutional Equities Research

Timken group follows a policy of selling through local arm in the region

Timken group globally follows the policy of local manufacturing wherever there is a large domestic market for any particular product. Moreover, the group sells products only through a regional franchise. Hence, in India, all imported products are sold through Timken India only. Timken India imports bearings using an arm's length mechanism under the transfer policy framework. At present, Timken India imports bearings required for cement industry from China and bearings for defence sector from the US.

Timken India is required to pay royalty of 3% and trademark fee of 1% to its parent on manufactured products

Exhibit 22: Royalty and its proportion to revenue



Source: Company, Nirmal Bang Institutional Equities Research

Timken India localises the product once critical mass is achieved

Timken India will localise production of particular bearing once critical mass is achieved, given the high cost of tooling and lower volume. Timken India's import content currently is ~25%. This percentage may remain at this level even if the company indigenises production of different types of bearings on a regular basis. This is mainly on account of continuous emergence of new segments. The company has localised or indigenised most of the products required by railways, CV and tractor segments. However, the bearings that go into cement and steel industries are imported. In the recent past, Timken India localised a considerable portion of its steel requirement (main raw material) which did well in expanding gross and EBITDA margins in FY15.

There is no overlap of business interests between listed entity and unlisted subsidiary of parent

Timken India's parent has a 100% subsidiary in Chennai which manufactures products mainly for exports and does not have any client in India. It makes products which are not manufactured by Timken India and of bigger size used for off-highway applications, large tonnage CVs and railways in North America. Whatever is required for the local market is manufactured and sold through Timken India. There is no cannibalisation of Timken India's products because the product range is different and the target market is different as well. Basically, Chennai plant has been set up as a low-cost manufacturing centre for the parent to manufacture the products for sale in North America. If Timken India had tried to manufacture the products which the Chennai plant makes, it would have gone out of focus as the philosophy of the Timken group is that the local plant should manufacture whatever is required for the local market. Moreover, it needs huge investments which would not have gone well with Timken India's objectives.

Transaction between Timken India and its parent governed by transfer pricing mechanism

There is transparency in transactions between Timken India and its parent/group entities. These transactions are governed by the transfer pricing mechanism and are under the preview of the law of land. Hence, it is fair to assume that these transactions at an arm's length won't be excessively margin dilutive for Timken India given the fact that it is an importer. Timken India's management confirmed that the company, being a fair company, is interested in growing the business profitability whether for majority stakeholders or minority shareholders and will always give importance to long-term business angle more than any short-term transfer pricing issue.

Company background

Timken India is a subsidiary of The Timken Company based in the US. The company was incorporated as a joint venture with Tata Steel in 1987 with each of them having a 40% stake. Timken group, in 1999, acquired Tata Steel's entire stake to raise its own stake to 80% in Timken India. However, in 2014, Timken group reduced its stake to ~75% to comply with the listing norms of the Securities and Exchange Board of India or SEBI.Timken India is the leader in the manufacture of TRBs in India. Timken India owns bearing manufacturing plant in Jamshedpur (since 1987) and industrial gear-box repair plant in Raipur (since 2013). Timken India's products are supplied to railways, CV and off-highway applications on mobile side of the business. On processing side, Timken India supplies to process industries such as metal, mining, cement, power generation, wind, oil & gas, pulp & paper and food & beverage companies. The company's imports are in the range of 20%-25% of its revenue. The company mainly imports bearings from its parent for new applications where volumes are low. The imports include products like lubricants, housings, spherical roller bearings, cylindrical roller bearings, condition monitoring equipment etc. Timken India also sources seals from other vendors in India. It focuses on localising products which have high volume potential. Timken India derives 30%-35% of its revenue from exports to parent and also group companies in other geographies. In many products, Timken India is low-cost manufacturer within the Timken group. The company commands overall market share of ~10% in organised bearing market in India. However, the company has nearly 45% share in TRBs. Timken India also has more than a 25% share in the largest TRB consuming segment outside automotive segment - railways. The company has increased its product distributors from 50 to 100 and will further expand to 150. Timken Company, based in the US (parent) has a 100% subsidiary to manufacture bearings in India. Its plant is located in Chennai.

Parent company

The Timken Company is a US$3bn conglomerate based in the US with operations in 28 countries. The company operates in bearing industry with a product basket encompassing bearings, lubrication, seals, gear drives, condition monitoring systems, other power transmission products etc. The company also provides rebuild and repair services. It is the pioneer in TRBs and enjoys a 4% market share across US$60bn global bearing market and a 25% share in US$10bn global TRB market. The company has total 62 plants and service centres all over the world and 5 technology centres globally. Out of these 5 centres, 2 are in Asia – China and India (Bengaluru). The company has made a series of acquisitions (10) over 2010-15 to strengthen its product portfolio and service offerings. The company derives 61% of its revenue from TRBs, 21% from selling other types of bearings and 18% from non-bearing products and services. The company had PAT of US$2bnin CY14 with PAT margin at 5.5%. The company clocked RoE of 11% in CY14. Its revenue is divided into two streams – mobile industry and process industry. These revenue streams contributed 55% and 45%, respectively, to total revenue in CY14. The Timken Company holds ~75% stake in Timken India through its Singapore arm.

Exhibit 23: Timken Company expanded portfolio of products beyond bearings

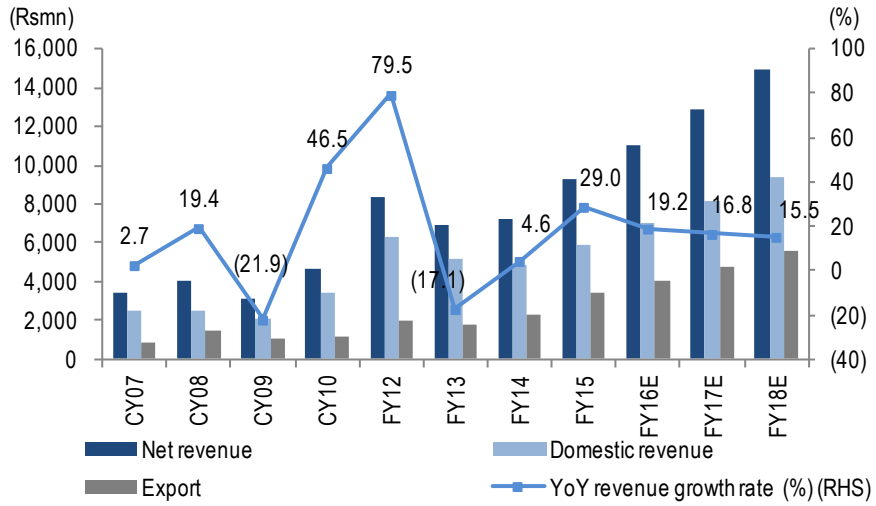
Source: Timken presentation (Jan 2015)

Financial analysis

Revenue CAGR of 17% expected over FY15-FY18E

Timken India's revenue growth over CY07-FY15 was 15% which was primarily led by exports which registered a CAGR of 21%, higher than that of net revenue. In addition to the demand for Timken India products, the depreciation in INR versus USD also augured well for the company. Revenue is expected to clock a CAGR of 17% over FY15-FY18E on account of domestic economic recovery and strong export growth. Strong exports de-risks the vagaries of recovery in domestic market. Timken India has taken steps to expand its capacity which will be modular in nature and can be used to make different products for local and overseas markets. Proposed large capital outlay and expansion programme of railways along with improved outlook on CV sales gives stronger revenue visibility for the company.

Exhibit 24: Total net revenue, domestic revenue and exports

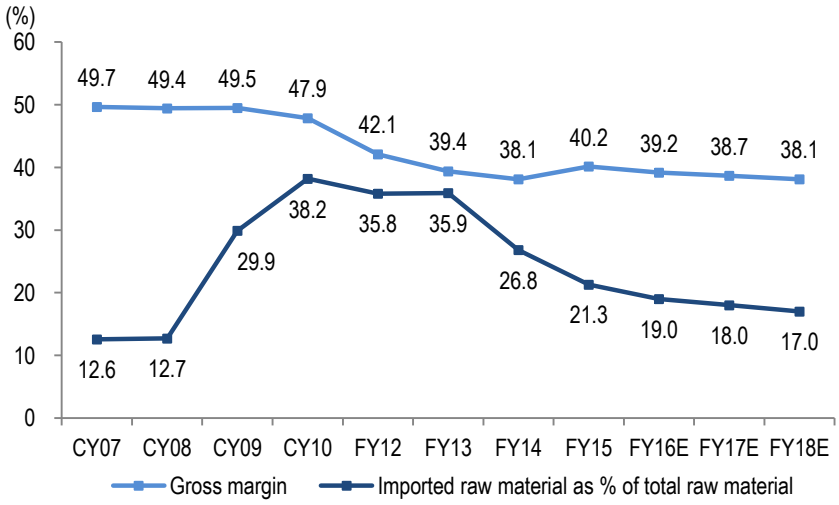


Source: Company, Nirmal Bang Institutional Equities Research

Gross margin expected to remain within the range of 38%-39% led by raw material cost rationalisation

Timken India has made efforts to rationalise raw material costs in the past few years. The company is a part of the global Timken group. By virtue of its parentage, Timken India sources raw material from qualified suppliers across the globe. Timken India is indigenising most of the steel and other components required. This has significantly reduced the probability of raw material cost inflation because of adverse currency movement.

Exhibit 25: Gross margin and proportion of imported raw materials in total raw materials required

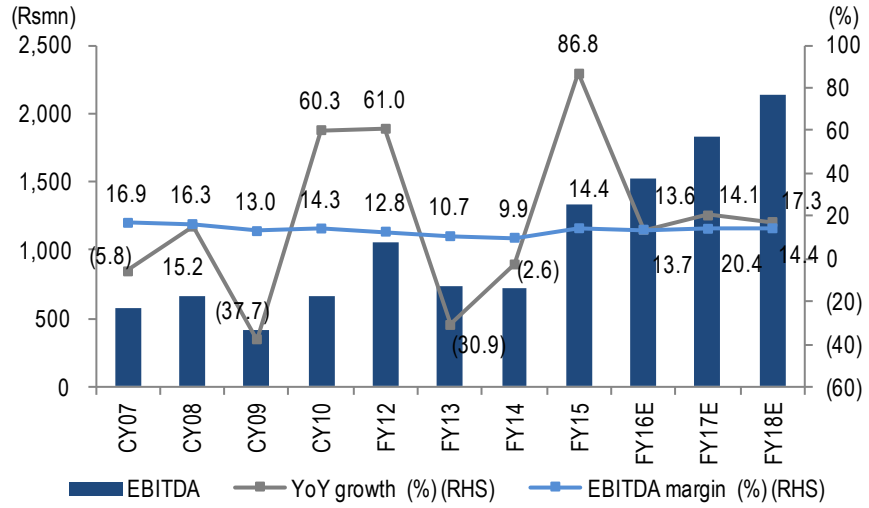


Source: Company, Nirmal Bang Institutional Equities Research

Expansion in EBITDA margin in FY15 is here to stay

EBITDA margin dropped secularly over CY07-FY14 from 17% to 10% on account of muted demand, INR depreciation which impacted import costs, and a higher proportion of low-margin traded goods. However, in FY15, gross margin improvement of 200bps, one-off high-margin export order and other cost rationalisation efforts coupled with a reasonable pricing environment and value addition by Timken India augured well in expanding EBITDA margin to 14%. Other qualitative factors which contributed to EBITDA margin expansion were focus on select segments and convincing clients to reduce the cost of ownership rather than focusing on upfront costs. We believe that a few of these factors like low raw material prices, high-margin exports and improving capacity utilisation may continue in the next few quarters. Hence, EBITDA margin is likely to stay around the current level with a positive bias over FY15-FY18E (except FY16E) as revenue growth allows favourable operating leverage.

Exhibit 26: EBITDA growth and margin

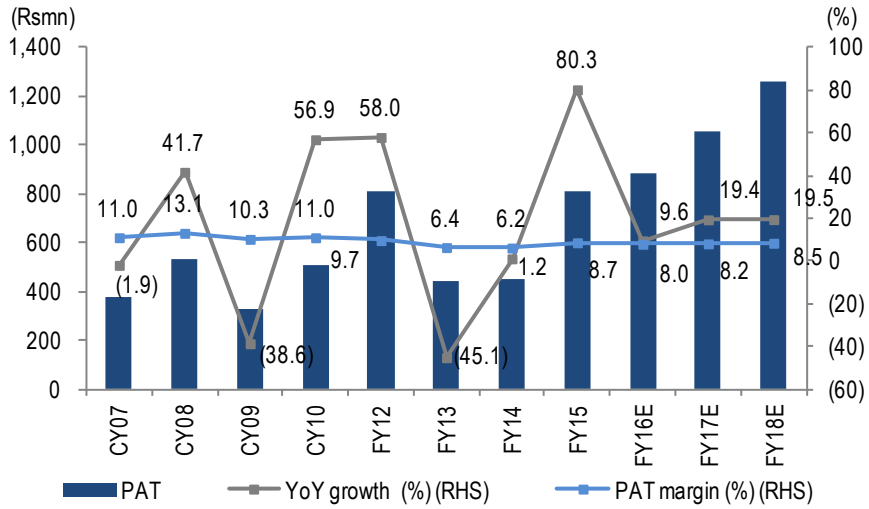


Source: Company, Nirmal Bang Institutional Equities Research

Net profit expected to clock a CAGR of 16 % over FY15-FY18E

Revenue CAGR of 17% and PAT margin profile in the range of 8%-8.5% expected over FY15-FY18E is likely to translate into PAT CAGR of 16% over the same period for Timken India.

Exhibit 27: PAT growth and margin

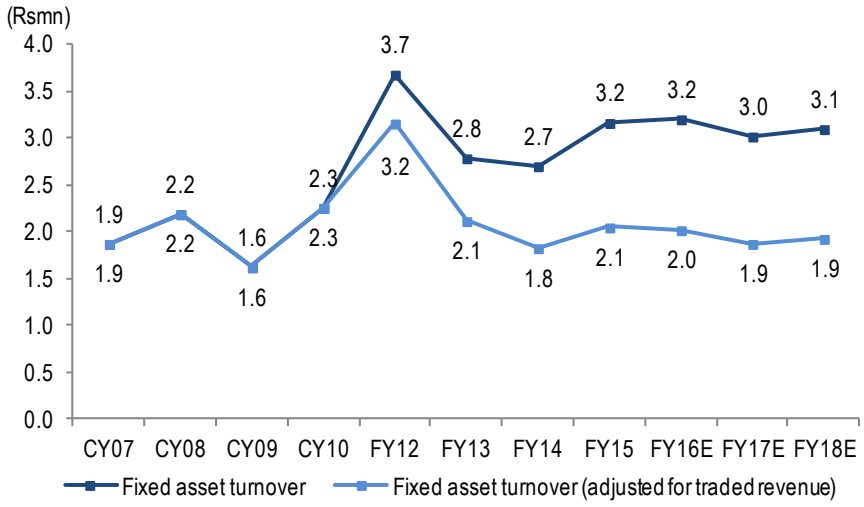


Source: Company, Nirmal Bang Institutional Equities Research

Asset turnover is higher compared to peers

Timken India has very high asset turnover in the industry, given its higher proportion of revenue from traded goods. Even after adjusting for traded goods, asset turnover is high on account of the focus on manufacturing low volume, high value TRBs. Higher turnover ratio also helps in boosting RoE and RoCE. We expect fixed asset turnover ratios to remain at a higher level, despite the increase in capacity likely in FY17E and FY18E.

Exhibit 28: Fixed asset turnover

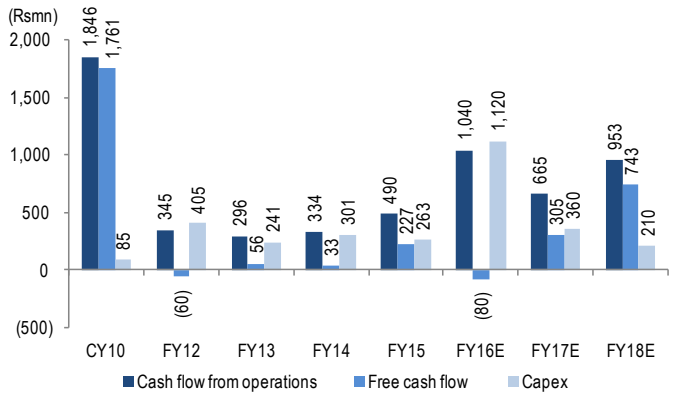


Source: Company, Nirmal Bang Institutional Equities Research

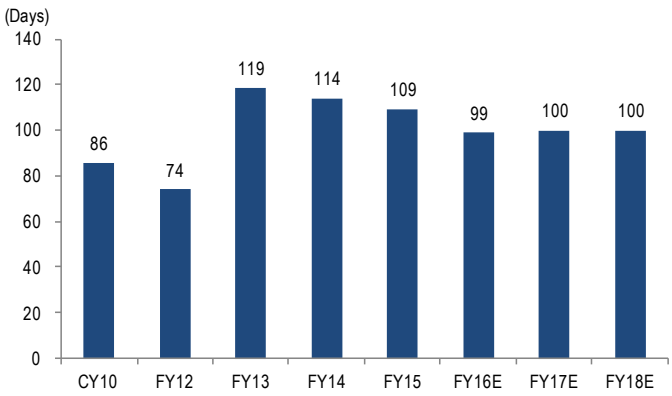
Positive cash flow operations and free cash flow generation expected to continue

Timken India's cash flow from operations was positive since FY97 (19 years). Free cash flow turned negative only five times during the same period. Over CY10-FY15, free cash flow was marginally negative only once. This is commendable despite deterioration in working capital days from 86 days in CY10 to 109 days in FY15. We expect cash flow from operations to remain positive However, capex of Rs1.35bn likely over FY16E-FY17E will make free cash flow negative in FY16E only and will again turn positive in FY17E

Exhibit 29: Cash flow and cash conversion cycle



Source: Company, Nirmal Bang Institutional Equities Research

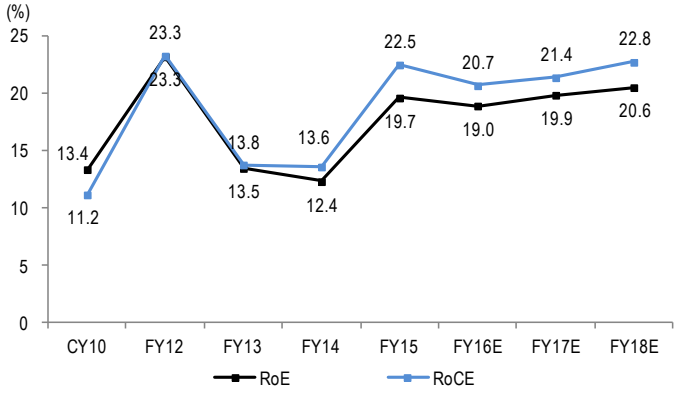


Source: Company, Nirmal Bang Institutional Equities Research

RoE/RoCE likely to jump to 20.6%/22.8%, respectively, by FY18E from 12.4%/13.7% in FY14

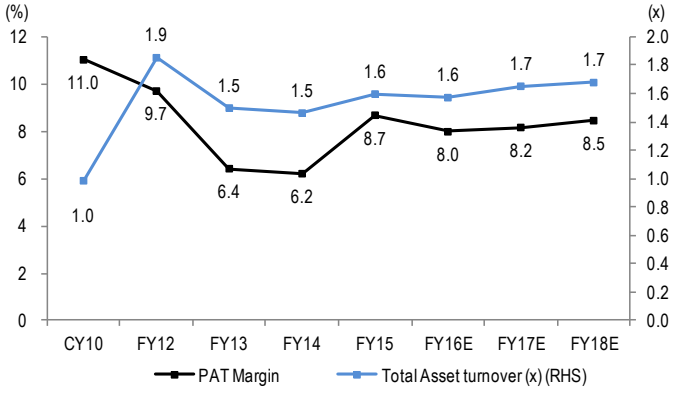
We have witnessed return ratios like RoE/RoCE improving over CY10-FY15 from 13%/11% to 20%/ 22%, respectively. This was led by increase in fixed asset/total asset turnover from 2.2%/1.0% to 3.2%/1.2%, respectively. However, over the same period, PAT margin declined from 11.0% to 8.7%, mainly because of the increase in blended tax rate from 28% to 34%. Higher asset turnover was led by surge in revenue from traded goods at a CAGR of 41% over FY12-FY15. Its proportion in total net revenue also increased from 14% to 35% during the same period. Going forward, we expect a slight expansion in net profit margin, leverage staying flat and marginal expansion in asset turnover ratio to contribute to return on equity expansion.

Exhibit 30: RoE and RoCE



Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 31: PAT Margin and total asset turnover

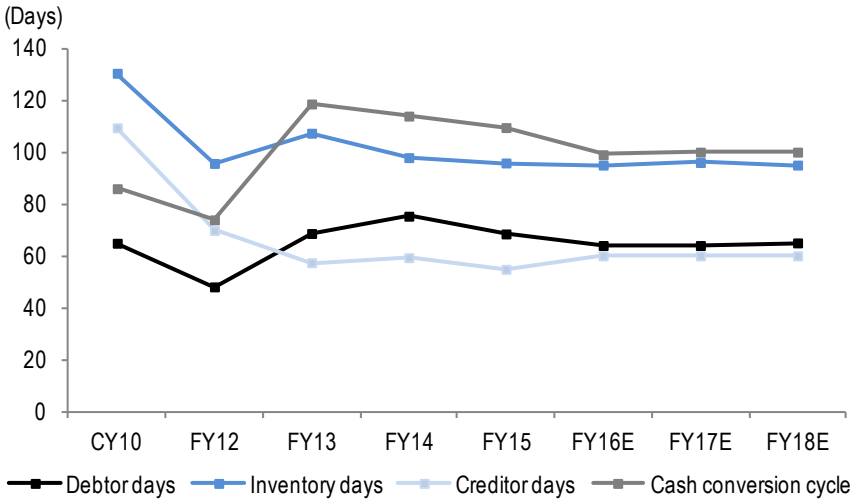


Source: Company, Nirmal Bang Institutional Equities Research

Working capital days expected to remain range-bound

Working capital days (cash conversion cycle) are low. Railways is the largest revenue segment for Timken India and the collection period is 90 days.

Exhibit 32: Cash conversion cycle



Source: Company, Nirmal Bang Institutional Equities Research

Outlook and valuation

Timken India is expected to clock a revenue CAGR of 17% and PAT CAGR of 16% over FY15-FY18E. Export growth is expected to be robust at more than 20% YoY. Margins are expected to remain at elevated level on account of – A) Positive demand outlook in niche segments in which Timken India has a strong presence – railways and MHCV, B) Timken India's timely capacity expansion in anticipation of robust demand outlook, C) Minimum competition that Timken India faces in exports (30% of revenue) and railway freight segment/high-speed passenger coach segment in India (25%-30% of revenue), and D) Indigenisation of key raw material – steel. However, the sharp appreciation of INR against USD can reduce the margin on exports. Over the medium term, there will be a positive development in automotive and railway segments wherein clients are moving from spherical and cylindrical bearings to TRBs on account of higher safety, and speed as well as load-bearing requirement. Timken India has higher return ratios among peers and is likely to maintain them. Positive cash flow from operations and positive free cash flow generation is likely in FY17E and FY18E. Timken India will continue to get technology support from its parent. Hence, we are positive on Timken India's future prospects. Timken India stock currently trades at 35.4x/29.6x FY17E/FY18E EPS of Rs15.5/Rs18.6, respectively. Average three-year and five-year P/E ratios for Timken India stand at 23.6x and 25.3x respectively. We believe the re-rating in earnings multiple will continue on account of strong revenue visibility and growth, margin sustenance, positive cash flow generation and tremendous growth potential in service segment. We have assigned Buy rating to the stock with a target price of Rs650, valuing it at 35xFY18E EPS of Rs18.6.

Key risks

INR appreciation may exert pressure on margins

Total expenditure in foreign currency terms, which includes import of raw materials, royalty payment etc. accounted for 26% and 23% of net revenue in FY14 and FY15, respectively. Depreciation in INR can further increase the cost of these items for Timken India. However, the company has shown robust growth in exports by posting a CAGR of 30% over CY10-CY15 and an average 34% share in net revenue in FY14 and FY15. Moreover, Timken India is a net exporter and hence depreciation in INR will be beneficial to it rather than appreciation. Any sharp appreciation in INR against USD may exert pressure on margins. Moreover, TIL does not hedge its net currency exposure and has indicated that any increase in cost of raw materials and traded goods is passed on to clients with a lag.

Rise in competition in niche segments

Timken India has limited competition in freight application bearing segment in railway sector in India, with NEI being the lone noteworthy domestic competitor. However, now with SKF India becoming eligible for freight application business, the competition for Timken India has increased. Timken India may have to face market share compression and margin pressure on account of increased competition.

Uptick in royalty rates may put pressure on margins

Timken India gets the technology from its parent and pays royalty (3%) and trademark fees (1%) on products manufactured in India. Over and above this, the company has to pay inter-company service charges to parent company for utilising its resources like manpower. Royalty payment made was in the range of 2.0% to 2.5% of net revenue over CY10-FY15 and inter-company charges were in the range of 1.1% to 1.7% over the same period. However, in FY15, both royalty and inter-company charges were at the low end of their respective ranges.

Competition from unlisted wholly-owned subsidiary of parent in exports and domestic market

Timken India has highest share of exports in revenue compared to peers. Exports are primarily to its parent in North America. The company has evolved as low-cost destination for sourcing for the parent. This is on account of high product quality and depreciation of INR against USD. However, the Timken group has wholly-owned subsidiary in Chennai which manufactures products that are different from what Timken India manufactures. However, if the Chennai plant also starts competing with Timken India in domestic market as well as in export market, then there may be revenue and margin decline.

Financials

Exhibit 33: Income statement

Y/E March (Rsmn)	FY14	FY15	FY16E	FY17E	FY18E
Net revenue from product sale	6,814	8,858	10,498	12,230	14,098
Sale of services	288	306	428	536	643
Other operating income	99	125	144	163	186
Revenue from operations	**7,201**	**9,290**	**11,071**	**12,929**	**14,926**
Other income	108	59	45	55	65
Total revenue	**7,310**	**9,349**	**11,116**	**12,984**	**14,991**
Cost of materials consumed	2,435	3,219	3,818	4,456	5,149
Purchase of stock-in-trade	2,059	2,504	3,112	3,708	4,334
Changes in the inventories	(27)	(194)	(221)	(265)	(275)
Excise duty and cess	(11)	30	25	30	30
Employee benefit expenses	529	668	748	838	938
Other expenses	1,500	1,725	2,070	2,334	2,606
Total expenses	**6,486**	**7,953**	**9,552**	**11,100**	**12,782**
EBITDA	**716**	**1,337**	**1,519**	**1,828**	**2,144**
Depreciation	158	168	202	252	279
EBIT	**558**	**1,169**	**1,317**	**1,576**	**1,865**
Financial charges and interest	9	6	22	31	18
PBT (before exceptional items)	**657**	**1,223**	**1,340**	**1,600**	**1,913**
Exceptional item	-	-	-	-	-
PBT	**657**	**1,223**	**1,340**	**1,600**	**1,913**
Total tax	209	416	456	544	650
Profit after tax	**448**	**807**	**884**	**1,056**	**1,262**

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 34: Cash flow

Y/E March (Rsmn)	FY14	FY15	FY16E	FY17E	FY18E
EBIT	558	1,169	1,317	1,576	1,865
Exceptional item (-)	-	-	-	-	-
(Inc.)/dec. in working capital	(246)	(422)	(69)	(675)	(607)
Other income	108	59	45	55	65
Depreciation	158	168	202	252	279
Tax paid (-)	(209)	(416)	(456)	(544)	(650)
Inc/(dec.) in other long-term liabilities	3	2	1	1	1
(Inc)/dec. in long-term assets (-)	(37)	(70)	0	-	-
Net cash flow from operations	**334**	**490**	**1,040**	**665**	**953**
Capital expenditure (-)	(301)	(263)	(1,120)	(360)	(210)
Net cash flow after capex	**33**	**227**	**(80)**	**305**	**743**
(Inc.)/dec. in invest. & non-current assets	-	-	-	-	-
(Inc)/dec. in current investment	85	67	146	(30)	(50)
Cash flow from investment activities	**(216)**	**(196)**	**(974)**	**(390)**	**(260)**
Interest paid (-)	(9)	(6)	(22)	(31)	(18)
Dividends paid (-)	(676)	(246)	(328)	(328)	(328)
Inc./(dec.) in short-term borrowing	32	(7)	75	(15)	(60)
Inc./(dec.) in long-term borrowing	-	-	200	(50)	(150)
Equity issue/(buyback)	512	-	-	-	-
Cash flow from financial activities	**(141)**	**(259)**	**(75)**	**(424)**	**(555)**
Others	83	1	-	-	-
Opening cash balance	140	201	237	229	80
Closing cash balance	**201**	**237**	**229**	**80**	**218**
Change in cash balance	61	36	(8)	(149)	138

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 35: Balance sheet

Y/E March (Rsmn)	FY14	FY15	FY16E	FY17E	FY18E
Share capital	680	680	680	680	680
Reserves and surplus	3,143	3,705	4,261	4,990	5,924
Net worth	**3,823**	**4,384**	**4,941**	**5,670**	**6,604**
Non-current liabilities	**90**	**106**	**307**	**258**	**109**
Other long-term liabilities	16	18	19	20	21
Long-term borrowings	-	-	200	150	-
Long-term provisions	74	88	88	88	88
Current liabilities	**1,084**	**1,363**	**1,824**	**1,932**	**2,221**
Short-term borrowings	32	25	100	85	25
Trade payables	730	860	1,139	1,342	1,559
Other current liabilities	221	346	400	320	452
Short term provisions	100	132	185	185	185
Total	**4,997**	**5,854**	**7,073**	**7,860**	**8,935**
Total gross block	2,807	3,057	3,846	4,706	4,916
Accumulated depreciation	1,842	1,989	2,191	2,443	2,722
Net fixed assets	**965**	**1,069**	**1,655**	**2,263**	**2,194**
Capital work in progress	256	268	600	100	100
Intangible assets development	-	-	-	-	-
Non-current Investments	-	-	-	-	-
Deferred tax assets (net)	45	39	39	39	39
Long-term loans and advances	163	233	233	233	233
Current assets	**3,568**	**4,245**	**4,546**	**5,225**	**6,369**
Current investments	233	166	20	50	100
Inventories	1,368	1,675	2,015	2,396	2,768
Trade receivables	1,486	1,742	1,941	2,267	2,658
Cash and carry equivalents	201	237	229	80	218
Short-term loans and advances	202	316	250	327	490
Other current assets	78	108	90	105	136
Total	**4,997**	**5,854**	**7,073**	**7,860**	**8,935**

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 36: Key ratios

Y/E March	FY14	FY15	FY16E	FY17E	FY18E
Per share (Rs)					
EPS	6.6	11.9	13.0	15.5	18.6
CEPS	8.9	14.3	16.0	19.2	22.7
BVPS	56.2	64.5	72.7	83.4	97.1
DPS	6.5	3.0	4.0	4.0	4.0
Dividend payout (%)	98.7	25.3	30.8	25.8	21.5
Valuation (x)					
P/E	83.6	46.3	42.3	35.4	29.6
P/BV	9.8	8.5	7.6	6.6	5.7
EV/EBITDA	52.0	27.8	24.67	20.5	17.3
M-cap/ sales	5.2	4.0	3.4	2.9	2.5
EV/sales	5.2	4.0	3.4	2.9	2.5
Return ratios (%)					
RoANW	12.4	19.7	19.0	19.9	20.6
RoACE	11.6	21.6	20.4	21.1	22.2
RoAIC	11.6	20.8	19.2	20.3	21.4
Margins (%)					
EBITDA margin	9.9	14.4	13.7	14.1	14.4
EBIT margin	7.7	12.6	11.9	12.2	12.5
Tax/PBT	31.9	34.0	34.0	34.0	34.0
Net profit margin	6.2	8.7	8.0	8.2	8.5
Expense ratios (% of revenue)					
Cost of materials consumed	33.4	32.6	32.5	32.4	32.7
Traded goods	28.6	27.0	28.1	28.7	29.0
Employee benefit expenses	7.3	7.2	6.8	6.5	6.3
Total expenses	90.1	85.6	86.3	85.9	85.6
Turnover and working capital ratios					
Debtor period (days)	75	68	64	64	65
Inventory period (days)	98	96	95	96	95
Creditor period (days)	59	55	60	60	60
Cash conversion cycle (days)	114	109	99	100	100
Fixed assets turnover (x)	2.7	3.2	3.2	3.0	3.1
Non cash net working capital (Rsmn)	2,081	2,503	2,572	3,248	3,855

Source: Company, Nirmal Bang Institutional Equities Research

NRB Bearings

4 January 2016

Reuters: NBEA.BO; Bloomberg: NRBBR IN

Initiating Coverage

Member of Elite Club of Indian Origin

NRB Bearings (NRB) is the largest needle roller bearing player in India with ~70% segmental market share and the fifth-largest bearing company with ~7% share in the country's total organised bearing market. It is one of the two organised bearing players of Indian origin among top five bearing players in the country. The company has identified needle roller bearings as its focus area, which was the largest contributor to revenue at 42% in FY15. NRB Bearings has globally competent technology and is a strong exporter with ~23% revenue contribution and a robust CAGR of 41% over FY10-FY15. Robust operating margin and RoE profile are the result of strong relationships with automotive OEMs (revenue contribution 60%-65%) right from the product development stage, and technological competency as well as importance given to profitability. NRB Bearings does not concentrate on volume and prefers not to compete aggressively in price-competitive segments like sedan in passenger vehicle or PV category. After hiving off industrial bearing business, NRB Bearings has become a play on automotive sector. We expect a revenue CAGR of 11% and a PAT CAGR of 16% over FY15-FY18E led by likely revival in domestic automotive sector and strong exports. We have assigned Buy rating to the stock with a target price of Rs167, which discounts FY18E EPS of Rs8.3 by 20x.

Customised products and engineering capabilities makes NRB Bearings the leader: NRB Bearings commands ~70% share in organised needle roller bearing market, which implies low competition for the company. This is on account of close OEM relationships (OEMs contribute 65% to revenue), customised product offerings and strong engineering capabilities reflected by research and development or R&D expenditure at 1.1% of revenue. Also, it has bagged a patent from the US patent authority for kingpin joints/bearings.

Exports thrust de-risks revenue: NRB Bearings' exports registered a CAGR of 41% over FY10-FY15 and contributed ~23% to revenue in FY15. The company exports its products to leading automotive OEMs across 20 countries and includes Volvo/Daimler, Mercedes, ZF, Getrag Transmission etc.

Sound financial health: NRB Bearings has a healthy EBITDA margin of ~17% and strong RoE of 20%, beating other leading players. However, there is low asset turnover owing to own manufacturing activity and lack of revenue from traded goods. Financial leverage is at a manageable level at 1x. NRB Bearings has generated positive cash flow from operations every year since FY98. However, higher inventory days keep the working capital cycle elongated. The company has maintained a healthy average dividend payout ratio of 30% over FY11-FY15.

Y/E March (Rsmn)	FY14	FY15	FY16E	FY17E	FY18E
Revenue	5,945	6,556	7,036	7,816	8,846
YoY (%)	*2.6*	*10.3*	*7.3*	*11.1*	*13.2*
EBITDA	1,006	1,148	1,208	1,371	1,565
EBITDA (%)	*16.9*	*17.5*	*17.2*	*17.5*	*17.7*
PAT	382	521	565	686	807
YoY (%)	*(18.8)*	*36.4*	*8.5*	*21.4*	*17.6*
FDEPS (Rs)	3.9	5.4	5.8	7.1	8.3
RoE (%)	*17.1*	*20.5*	*19.4*	*20.4*	*20.5*
RoIC (%)	*10.9*	*12.7*	*12.8*	*14.4*	*15.6*
P/E (x)	35.5	26.1	24.0	19.8	16.8
EV/EBITDA (X)	16.0	14.0	13.0	11.3	9.8

Source: Company, Nirmal Bang Institutional Equities Research

BUY

Sector: Industrial Goods

CMP: Rs140

Target Price: Rs167

Upside: 19%

Sameer Panke
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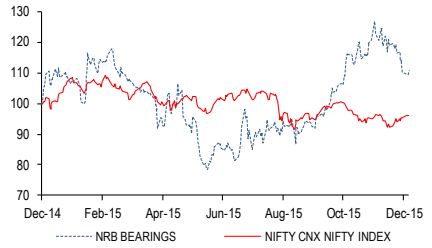
+91-22-3926 8114

Key Data

Current Shares O/S (mn)	96.9
Market Cap (Rsbn/US$mn)	13.5/204.6
52 Wk High /Low (Rs)	162/96
Daily Volume (3M NSE Avg.)	89,019

Shareholding (%)	4QFY15	1QFY16	2QFY16
Promoter	58.2	57.2	57.2
FII	11.7	12.0	11.8
DII	14.2	15.5	16.3
Others	15.9	15.4	14.7

One-Year Indexed Stock Performance

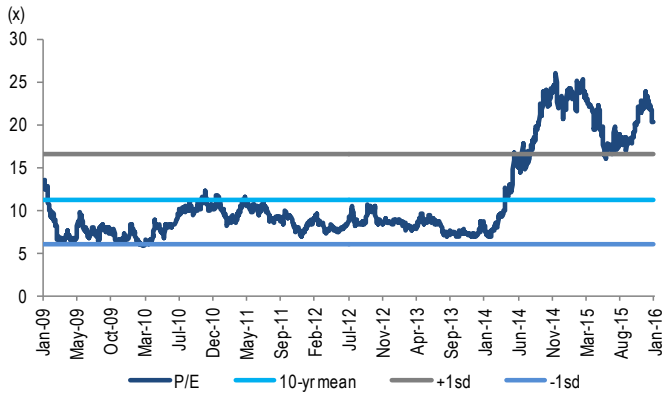


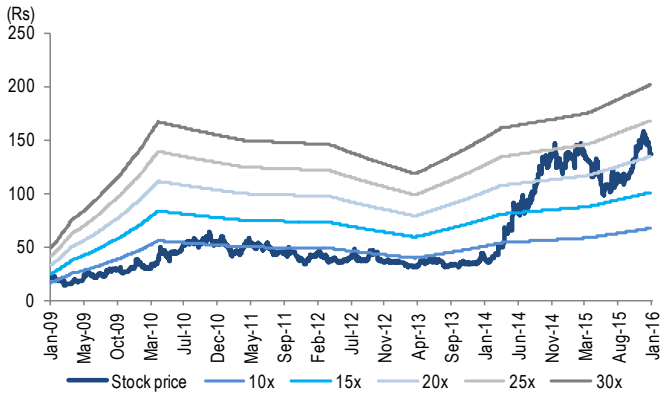
Price Performance (%)

	1 M	6 M	1 Yr
NRB Bearings	(8.2)	29.4	9.7
Nifty Index	(0.2)	(5.4)	(4.0)

Source: Bloomberg

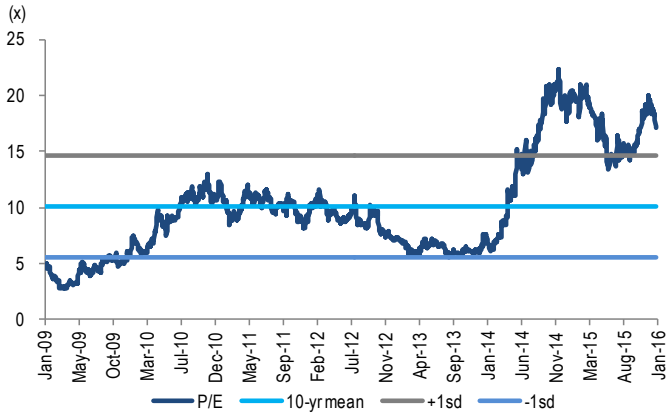
Exhibit 1: One year forward P/E chart

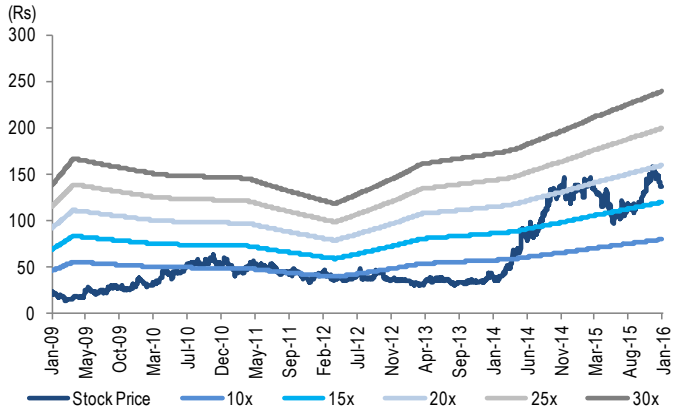




Source: Nirmal Bang Institutional Equities Research

Exhibit 2: Two year forward P/E chart





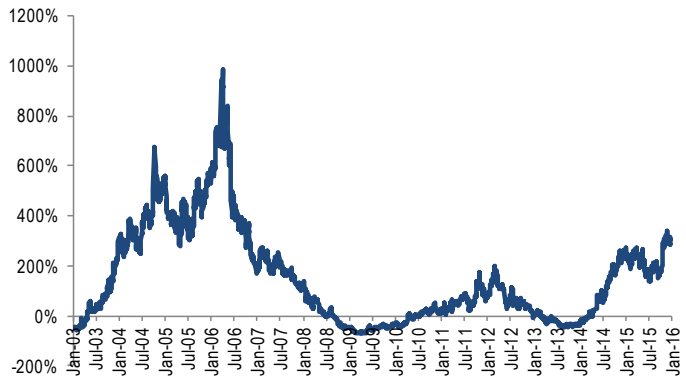
Source: Nirmal Bang Institutional Equities Research

Exhibit 3: Average PE

Particulars	1 year forward			2 year forward		
(x)	3 year average PE	5 year average PE	10 year average PE	3 year average PE	5 year average PE	10 year average PE
NRB Bearings	14.7	12.4	16.3	12.4	11.3	17.6

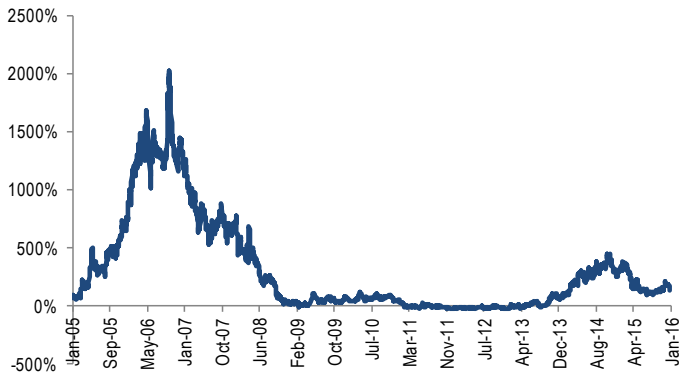
Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 4: Three year rolling return



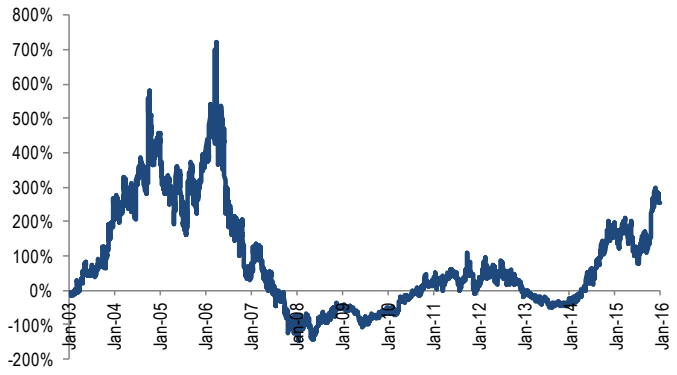
Source: Nirmal Bang Institutional Equities Research

Exhibit 5: Five year rolling return



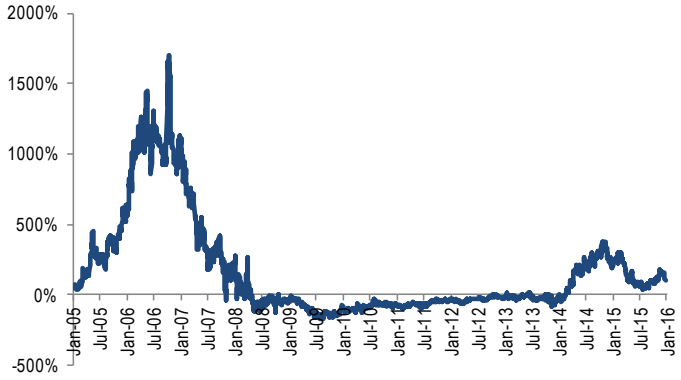
Source: Nirmal Bang Institutional Equities Research

Exhibit 6: Three year Alpha



Source: Nirmal Bang Institutional Equities Research

Exhibit 7: Five year Alpha



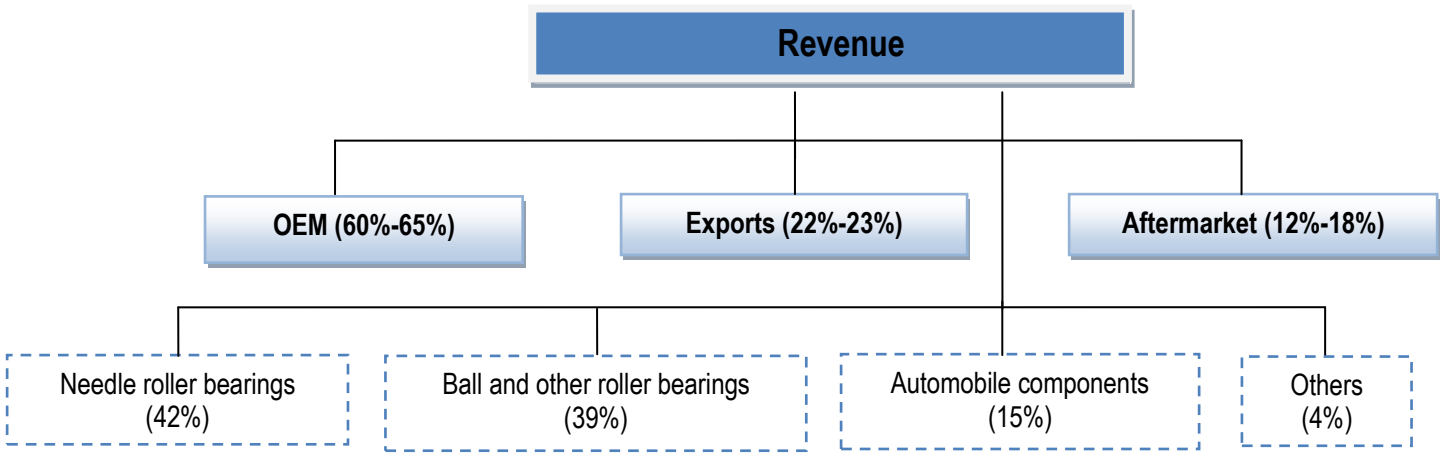
Source: Nirmal Bang Institutional Equities Research

Investment Rationale

NRB Bearings is a play on automotive segment wherein double-digit volume growth is expected

NRB Bearings, after demerging its industrial bearings subsidiary into a separate listed entity, became a pure play on automotive segment as it manufactures bearings only for this segment. Major portion of its revenue comes from sales to OEMs and exports which attracts high entry barriers. The company manufactures needle roller bearings, cylindrical bearings, special tapered roller bearings and special ball bearings. All these are customised products, unlike its peers which derive a sizable portion from standardised products. The company also manufactures some components like shafts, cages, other types of bearings like kingpin bearings etc. No single client is contributing more than 12% to the revenue of NRB Bearings. This is a deliberate policy adopted by the company. It claims that 90% of the vehicles in India use its bearings.

Exhibit 8: Revenue break-up

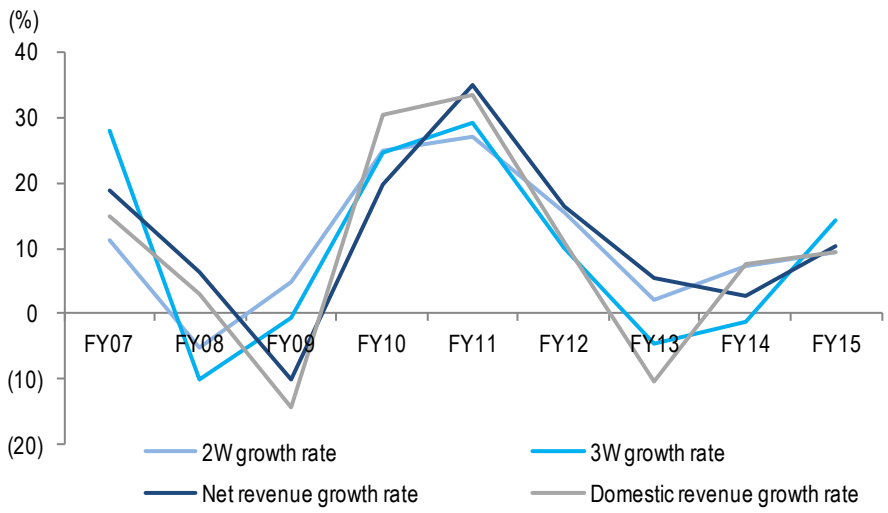


Source: Company, Nirmal Bang Institutional Equities Research

NRB Bearing's revenue is strongly correlated with automotive segment's growth. Over FY10-FY15, total automotive volume registered a CAGR of 11% while NRB Bearings' revenue CAGR was 13% The company could outpace domestic automotive volume growth on account of exports, which clocked a CAGR of 41% over the same period. However, domestic revenue CAGR over the same period was closer at 9.4% to automotive volume CAGR. As two-wheelers and three-wheelers are estimated to have a major share in revenue, NRB Bearing's domestic revenue may mimic two-wheeler/three-wheeler volume growth chart.

We expect the company's revenue to clock a CAGR of 11% over FY15-FY18E led by volume CAGR of 9% in two-wheelers, 8% in three-wheelers, 15% in passenger vehicles or PVs and 16% in commercial vehicles or CVs. Total revenue CAGR of 11% will also be led by a likely 13% CAGR in exports and a 10% CAGR in domestic revenue.

Exhibit 9: Domestic revenue growth, total revenue growth and two/three-wheeler growth

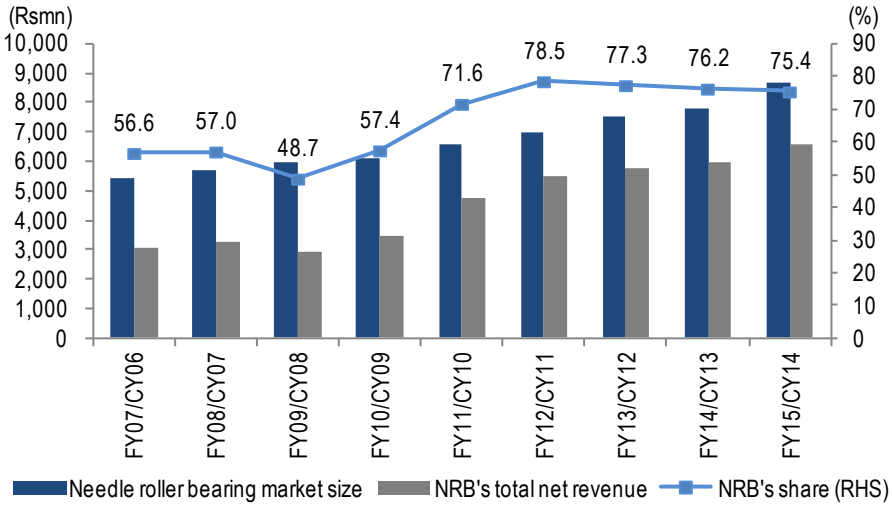


Source: Company, Society of Indian Automobile Manufacturers or SIAM, Nirmal Bang Institutional Equities Research

Leadership in needle roller bearings is culmination of various factors and is likely to be maintained

NRB Bearings commands leadership position in needle roller bearing market (size – Rs8.5bn-Rs9.0bn) with segmental market share of ~70%. This is possible on account of various factors.The company considers itself as a technology-focused engineering entity supplying components to automotive industry. It manufactures more of customised products rather than standardised products. Needle roller bearing is a niche product and finds applications where axial or thrust load is higher and revolution per minute (RPM) requirement is moderate. Moreover, the compact size makes needle roller bearing a preferred choice for applications like steering columns or assembly, gear box, front axle, entire power train and drive etc. As NRB Bearings prefers to work with automotive OEMs right from the product development stage, it enjoys strong relationships with them. It has competent technology by virtue of its erstwhile association with Nadella (France) and INA (Schaeffler AG group company) through SNL Bearings. This augurs well in keeping competition at bay as product approval takes years together. Moreover, OEMs have stringent norms with respect to quality of bearing, ability of bearing company to supply in large quantity and OEMs' preference for proximity of bearing manufacturer's facility near their plants. The principle advantage to NRB Bearings is that if it gets selected as a vendor, then for the first few years (normally first five years) it remains as a sole supplier or a major supplier among two vendors. This augurs well in keeping market share high, margins at a higher level and competition away.

Exhibit 10: NRB Bearing's share in needle roller bearings market

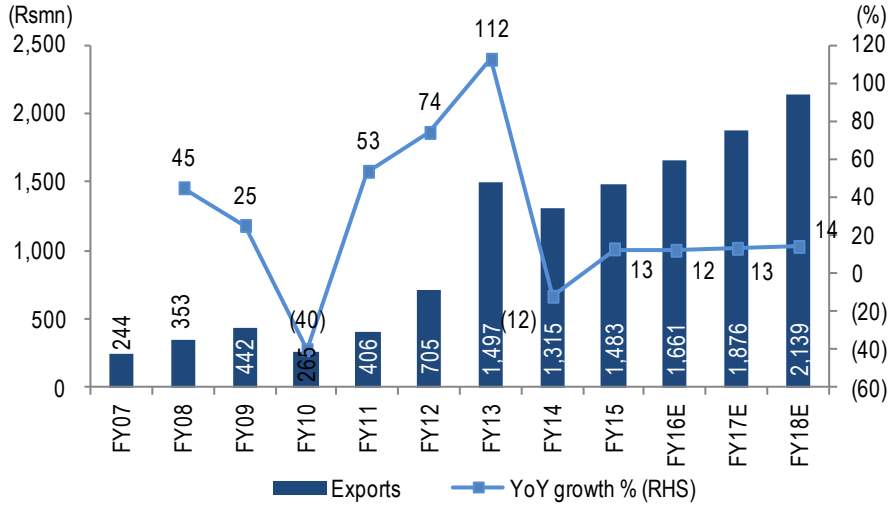


Source: Company, Industry, Nirmal Bang Institutional Equities Research

Exports doubled over FY12-FY15 - we expect the double-digit growth to continue

NRB Bearings' exports registered a CAGR of 41% over FY10-FY15 and contributed ~23% to revenue in FY15. In fact the company has doubled its exports from Rs705mn to Rs1482mn over FY12-FY15. The company exports its products to.global automotive OEMs in the US, Europe and Latin America. It exports to more than 20 countries. The dual advantages of export thrust are - it can position itself as a world-class bearing vendor and mitigate cyclicality in domestic revenue. NRB Bearings has developed strong relationships with global OEMs and achieved the status of Tier I and Tier II vendor. Higher proportion of revenue from exports keeps the margins at a higher level. However, export revenue is subject to volatility in exchange rate. NRB Bearings follows the strategy of supplying to a particular platform of OEMs globally and thereby reduce the risk of country concentration. Export revenue is largely in euro and US dollar or USD. The recent depreciation of Euro against USD and INR (Indian rupee) had an adverse effect on revenue and margins in 1HFY16. One of the reasons for very high export CAGR was the company's policy of getting its product approved by engineering and technology centre at main offices of targeted overseas automotive OEMs and avoids going through international procurement offices of the said OEMs in India. We expect its exports to clock a CAGR of 13% over FY15-FY18E.

Exhibit 11: Export revenue and YoY growth rate



Source: Company, Nirmal Bang Institutional Equities Research

Recently the company won some prestigious contracts and is developing new clients

NRB Bearings recently won a contract to supply bearings to Audi for its new car model. The company also bagged a contract from Hyundai recently. Winning contracts from Korean OEMs is really remarkable, given the fact that Korean OEMs use Indian vendors' price bids to negotiate with Korean vendors. They have preference for Korean vendors over Indian vendors. The plant of NRB Bearings' subsidiary in Thailand has been audited and approved by Honda Motors recently and NRB Bearings is expected to supply products from this plant to Honda Motors. The company recently started work on the bid to supply bearings for the car model to be launched in 2021. It signifies a long-drawn homologation period required for sourcing business from OEMs and efforts required to build relationships with clients. NRB Bearings is proud to supply bearings to Defence Research and Development Organisation (DRDO) for its unmanned aerial vehicle. Currently, it is focusing on increasing the business from scooter manufacturers like Honda Motorcycles and Scooters India (HMSI) and TVS Motor Company, given the fact that the scooter category is showing a higher growth rate compared to motorcycle in two-wheeler segment. NRB Bearings Europe GmbH, a wholly-owned subsidiary, was set up last year in view of rising exports to Europe. This subsidiary provides marketing and customer support services.

Working with leading OEMs in India and overseas

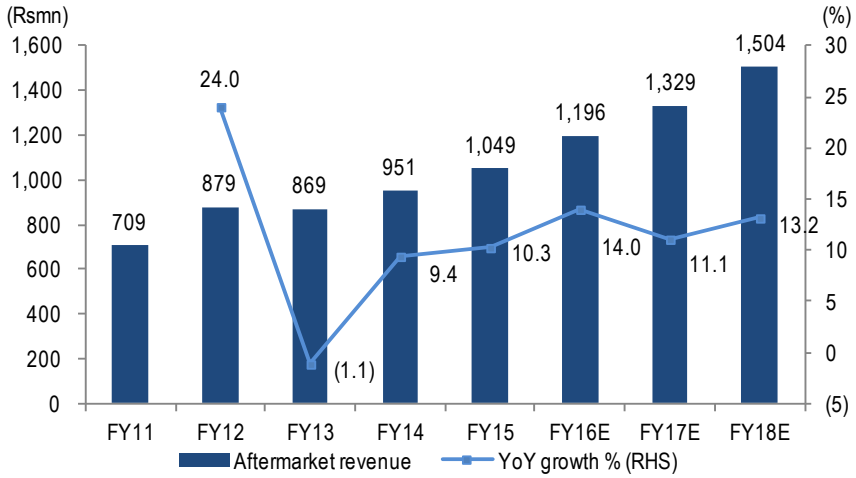
NRB Bearings is Tier I supplier to most Indian automotive OEMs which include Hero MotoCorp, Bajaj Auto, Honda Motorcycles and Scooters India, Tata Motors, Maruti Suzuki India, Mahindra and Mahindra, TVS Motor Company, Ashok Leyland etc. The company also supplies to global leading automotive OEMs like Renault Volvo, Daimler, John Deere, Audi, Mercedes etc. The company also supplies to leading automotive component providers like ZF group, Getrag Transmission Corporation, Ingersoll Rand, GKN Driveline etc. The company recently won orders from Hyundai, an order from Audi for its new car model and is soon expected to start supplies to Honda Motors from its Thailand-based subsidiary.

Low penetration in after-market segment provides huge potential for growth

NRB Bearings does not look at one segment in isolation. The company's aim is to grow in all segments. It follows the principle of de-commoditised, diversified and de-risked business growth in after-market business development as well. The company believes that going with OEMs also opens up opportunities in after-market for its products, given the fact that the client will be replacing original bearing for another original bearing only. After-market revenue contribution stagnated in the range of 15%-18% for NRB Bearings. The company has 13 warehouses and more than 3,000 stock-keeping units (SKUs) across India. It has a distribution network comprising over 150 distributors and dealers. We have been given to understand that its products have 30% extra life compared to those of its competitors and this is one of the reasons for lower off-take in after-market segment for its products. Needle roller bearing applications require the bearing to have higher precision and therefore NRB Bearings has to deliver high quality products. This aspect also keeps demand low for needle roller bearings used in gearbox, power transmission and steering assembly applications in the after-market. However, the demand for bearings for use in wheel and clutch applications in after-market segment is comparatively higher.

The margins and collection period in after-market segment for critical application bearings are better than that of OEM segment. NRB Bearings is looking positively to expand its after-market network and boost the revenue from this segment. We have been given to understand that it does not have a big presence in PV space in after-market segment, but it is the leader in two-wheeler/three-wheeler space in after-market segment. The company is planning to introduce some other complementary products to supplement the sales of needle roller bearings. However, it has to face competition from low-priced products from unorganised segment. NRB Bearings' after-market revenue is expected to clock a CAGR of 13% over FY15-FY18E.

Exhibit 12: After-market revenue and its growth rate

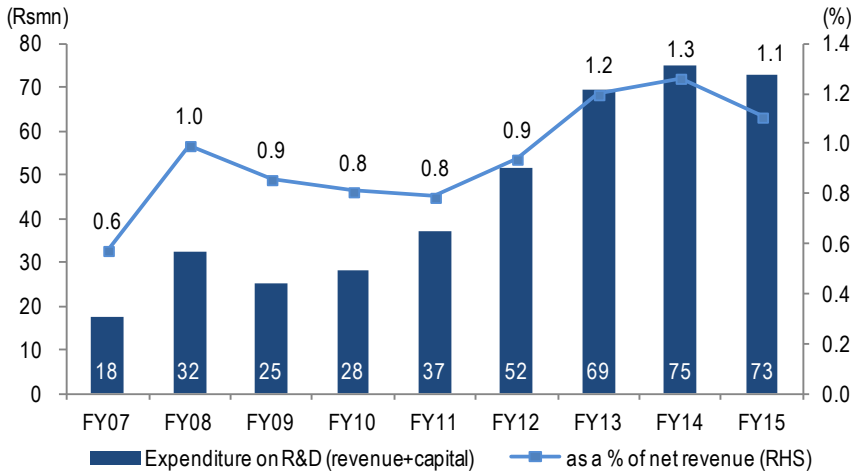


Source: Company, Nirmal Bang Institutional Equities Research

State-of-the-art engineering centre for research and development (R&D)

NRB Bearings established its R&D centre in 2000 at Thane in Maharashtra. There are two types of R&D or engineering improvement works going on. One is product-oriented and the other is process or advanced material-oriented. The company has successfully reduced the weight of some of its bearings by as much as 10%. It spends 1.1% of the revenue on R&D. The company inherited technological competence from Nadella (France), INA (Schaeffler group company, Germany) through SNL Bearings (73.45% subsidiary of NRB Bearings). The company bagged a patent from the US patent office in 2014 for kingpin bearings supplied to Renault. The company is confident of getting a global patent for this product in due course. NRB Bearings has developed a cage-less bearing comprising only rollers and a shell. This ground-breaking design was able to circumvent the backside and differential issues, completely eliminating the occurrence of bearing failure in customers' trucks. Unlike its multinational bearing peers, NRB Bearings does not have to pay any royalty and trademark fee for the technology. Needle roller bearings are used in applications where thrust or axial load is higher and the space is limited. Hence, needle roller bearings are very compact in size and require higher precision. This sort of high precision is achievable only for companies that have vast experience, technology and associated hardware.

Exhibit 13: Revenue and R&D expenditure



Source: Company, Nirmal Bang Institutional Equities Research

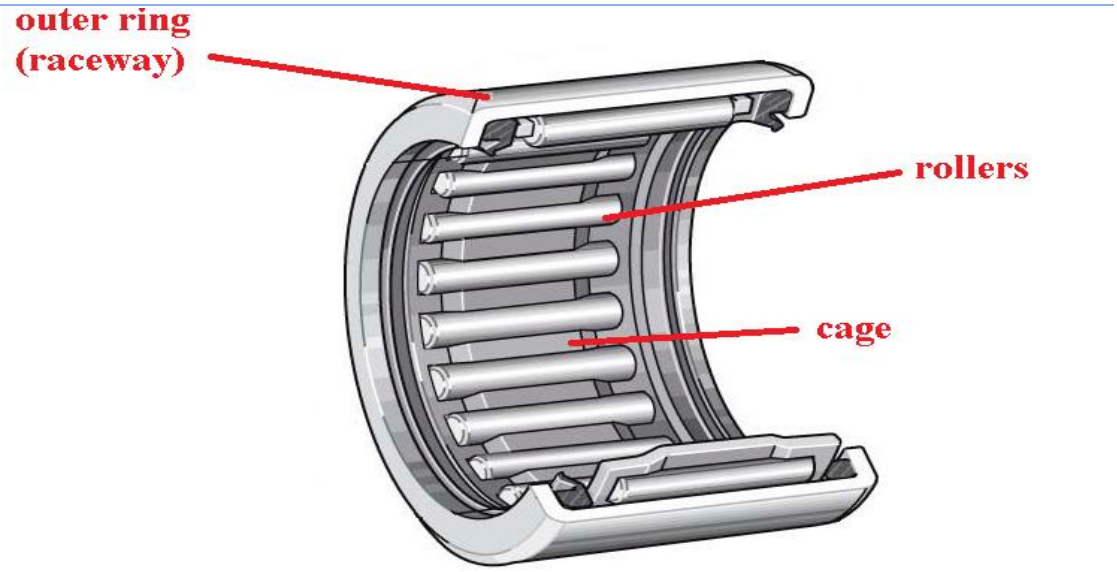
Non-compete clause in demerger scheme will remain effective till 2017

NRB Bearings has demerged its industrial bearing business to NRB Industrial Bearings.(NIBL), a separate listed entity, in August 2012. The share swap ratio was 4:1 (for every four shares of NRB Bearings, one share of NIBL was allotted). In the scheme of arrangement, the non-compete clause entered into between the two entities expires in 2017. As per the Reserve Bank of India (RBI) regulations, NRB Bearings also extended corporate guarantee not exceeding US$15mn (equivalent to Rs900mn) for foreign currency loans on the books of the then industrial bearing subsidiary which got demerged. It was further agreed that NRB Bearings will provide an inter-company loan up to Rs200mn to NIBL. The corporate guarantee provided by NRB Bearings expires on 30 September 2018. As per the annual report for FY15, the outstanding corporate loan guarantee was down to Rs540mn from Rs748mn in FY14. We have been given to understand that it has been further lowered to Rs250mn and that the current inter-company loan is Rs40mn.

Company background

NRB Bearings is fifth-largest bearing manufacturer in India with an overall market share of ~7% and specialises in needle roller bearings which are customised in nature and find application where compact-sized bearings are required. Two-wheeler industry is using a large proportion of needle roller bearings per two-wheeler as compared to four-wheeler on account of requirement of compact-sized bearings. Currently NRB Bearings manufactures bearings for automotive or mobility sectors only. Two-wheeler segment estimated to have a large share in its revenue. The company is the largest needle roller bearing manufacturer in India with ~70% segmental market share. NRB Bearings, incorporated in 1965 in collaboration with French needle bearing manufacturer Nadella SA (later acquired by Torrington and finally by Timken) and Sahney family, is a pioneer in the production of needle bearings in India. The Sahney family bought out Timken's 26% stake in NRB Bearings in 2005. The company's philosophy is to remain technology-focused. NRB Bearings believes in doing relationship-based business rather than going for a price war to increase volume. Therefore, it has decided not to focus on sedan segment in passenger vehicle or PV category. The company gets involved with the client right from the stage of platform development and thereby has established strong relationships. On account of association with OEMs from the early stage of designing, the relationships span over decades. The company is a strong export franchise with around one-fourth of its revenue coming from exports. It has presence in more than 20 countries and is Tier I and Tier II vendor to global automotive OEMs and large global automotive component leaders. The company draws 60%-65% revenue from OEM clients while 15%-18% comes from after-market segment. NRB Bearings has a distribution network comprising 150 distributors and dealers along with ~3,000 SKUs. The company has its own R&D facility in Thane (Maharashtra), set up in 2000, and does not incur any expenditure on royalty payment and trademark fees. NRB Bearings has eight manufacturing plants – one each in Waluj, Jalna, Chikalthana (Aurangabad) and Thane (Maharashtra), Pantnagar (Uttarakhand), Hyderabad (Andhra Pradesh), Ranchi (Jharkhand) and Rayong (Thailand). Waluj and Jalna plants account for a major share of the company's bearing production. It has three subsidiaries - SNL Bearings (needle roller bearing plant in Ranchi, Jharkhand) and NRB Thailand (plant in Rayong, Thailand) and NRB Bearings Europe GmbH. SNL Bearings was erstwhile a part of the Shriram Group with technology from INA (Schaeffler AG group, Germany), in which NRB Bearings holds ~74% stake. The objective to buy SNL was to get access to INA's technology. The objective of setting up a plant in Thailand was to serve Korean and Japanese automotive OEMs. The objective of European subsidiary is to increase exports to Europe. This subsidiary provides marketing and customer support services. The Sahney group underwent restructuring in 2011-12 and demerged NRB Bearings' industrial bearing business into a separate listed entity i.e. NRB Industrial Bearings or NIBL. The share swap ratio was 4:1 (for every four shares of NRB Bearings, one share of NIBL was issued).

Exhibit 14: Needle roller bearing



Source: Industry, Nirmal Bang Institutional Equities Research

Subsidiaries provide access to technology and new markets

There are three subsidiaries of NRB Bearings. Two of them have been set up overseas – one each in Thailand and Europe. There are specific objectives for setting up these subsidiaries. The company has acquired a majority stake in SNL Bearings to access technology of INA. The company has set up a wholly-owned subsidiary in Thailand to provide bearings to Japanese and Korean automotive OEMs. In FY15, NRB Bearings set up another wholly-owned subsidiary in Germany with a view to increase exports to Europe. This subsidiary provides marketing and customer support service to clients in Europe.

SNL Bearings (SNL) – This company manufactures various types of needle roller bearing components such as needle bushes, needle rollers etc. NRB Bearings holds a 73.45% stake in the company. SNL was earlier known as Shriram Needle Bearings and was part of Shriram group. It was a joint venture between Shriram group and INA (Schaeffler group company, Germany). In 2000, NRB Bearings acquired a 45% stake in loss-making SNL and subsequently increased it to 73.45%. NRB Bearings has turned around SNL within five years. SNL turned into the black in FY05. As mentioned earlier, NRB Bearings was interested in having access to INA's technology and therefore acquired the stake. SNL enjoys higher EBITDA margin of 25%-30%. SNL is a listed company with market capitalisation of Rs567mn as of 31 December 2015, which translates into ~Rs6 per share of NRB Bearings.

Exhibit 15: Financials

Particulars (Rsmn)	FY10	FY11	FY12	FY13	FY14	FY15
Revenue	130	174	205	230	230	265
PBT	1	48	62	61	50	67
PAT	**1**	**38**	**45**	**40**	**34**	**45**
EBITDA margin (%)	*6.4*	*40.2*	*33.6*	*29.4*	*25.4*	*28.6*
PAT margin (%)	*0.4*	*21.9*	*21.8*	*17.2*	*14.7*	*17.2*
Share capital	136	116	96	76	56	41
Reserves and surplus	2	22	(4)	28	55	73
Total assets	**191**	**193**	**138**	**179**	**214**	**224**

Source: Company, Nirmal Bang Institutional Equities Research

NRB Bearings Thailand – NRB Bearings set up a wholly-owned subsidiary in 2008 in Thailand. The main objective was to serve Japanese and Korean automotive OEMs. For initial few years, the subsidiary was dealing in traded goods only and making losses until FY14. However, manufacturing activity is going up and it now contributes 40% to revenue. New business is being finalised with global European and Japanese customers and the manufacture of new products as well as enhanced production of needle roller bearings planned during FY16 will help in improving the financial results in coming years. We have been given to understand that Japanese automotive giant Honda Motors recently audited the company's plant and gave its approval.

Exhibit 16: Financials

Particulars (Rsmn)	FY10	FY11	FY12	FY13	FY14
Revenue	3	6	90	135	168
PBT	(3)	(2)	(33)	(24)	(56)
PAT	**(3)**	**(2)**	**(33)**	**(24)**	**(56)**
PAT margin (%)	*(85.1)*	*(37.7)*	*(36.7)*	*(17.9)*	*(33.4)*
Share capital	74	74	83	204	203
Reserves and surplus	-	-	(141)	(184)	(236)
Total assets	**24**	**31**	**307**	**361**	**502**

Source: Company, Nirmal Bang Institutional Equities Research

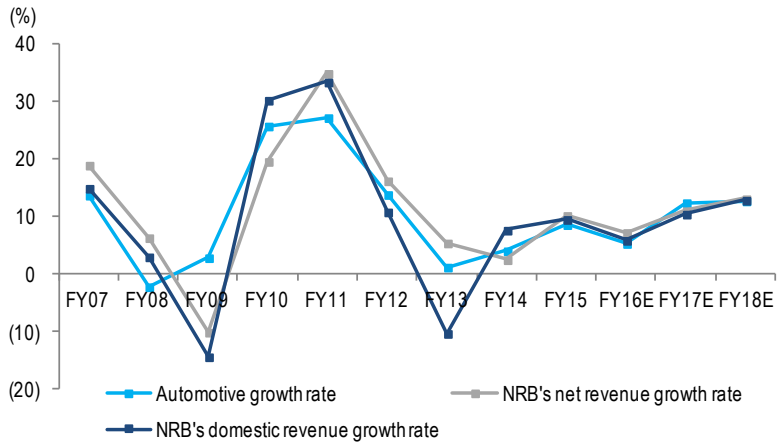
NRB Bearings Europe GmbH – NRB Bearings set up this wholly-owned subsidiary in FY15 with a view to increase exports to Europe. This subsidiary provides marketing and customer support services.

Financial analysis

Revenue expected to post a 11% CAGR over FY15-FY18E

Revenue CAGR over FY10-FY15 was 13%, beating organised bearing industry CAGR of 7.5% over the same period. This was mainly driven by export growth. Exports clocked a CAGR of 41% over the same period. Its share in net revenue increased from 7.5% in FY10 to 22.6% in FY15. Domestic revenue posted a lower CAGR of 9%. Domestic OEMs' share in revenue is higher at 60%-65%. However, if one looks at the performance over FY12-FY15, revenue clocked a CAGR of a mere 6% led by export CAGR of 28% and domestic revenue CAGR of 2%. The growth of domestic automobile industry will be key determinant of the company's performance. We expect exports to continue its performance on account of new contract wins. Moreover, revival in domestic automotive segment, primarily in two-wheeler category, will augur well in driving revenue growth. We expect almost doubling of revenue CAGR to 11% over FY15-FY18E versus 6% clocked over FY12-FY15. This is likely to be driven by domestic revenue CAGR of 10% and export CAGR of 13%. Automotive segment volume is expected to clock a CAGR of 10% over FY15-FY18E which is double of what was posted in FY12-FY15. New contract wins, new product launches and increased footprint in after-market segment are expected to be main drivers.

Exhibit 17: Revenue growth rate and automotive sector growth rate

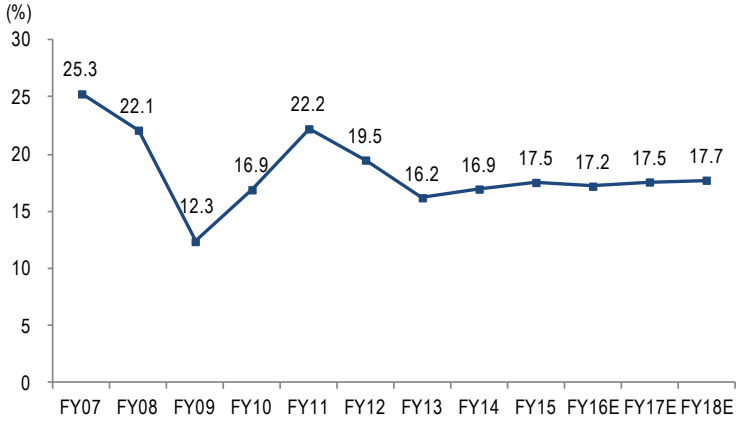


Source: Company, SIAM, Nirmal Bang Institutional Equities Research

EBITDA margin to remain at elevated level of ~17.5%

NRB Bearings has decent EBITDA margin compared to its peers. This is on account of various advantages which it has over multinational peers like higher blended gross margin, no revenue from low-margin traded goods, integrated operations (right from designing to production),in-house R&D which helps in saving money on royalty payment and trademark fees, higher proportion of cutomised products and a higher share of exports in revenue. Improvement in operating leverage led by growth in automotive volume, continuous dominance of OEMs' share in revenue, softer commodity prices & export growth will keep the margins at an elevated level.

Exhibit 18: EBITDA margin

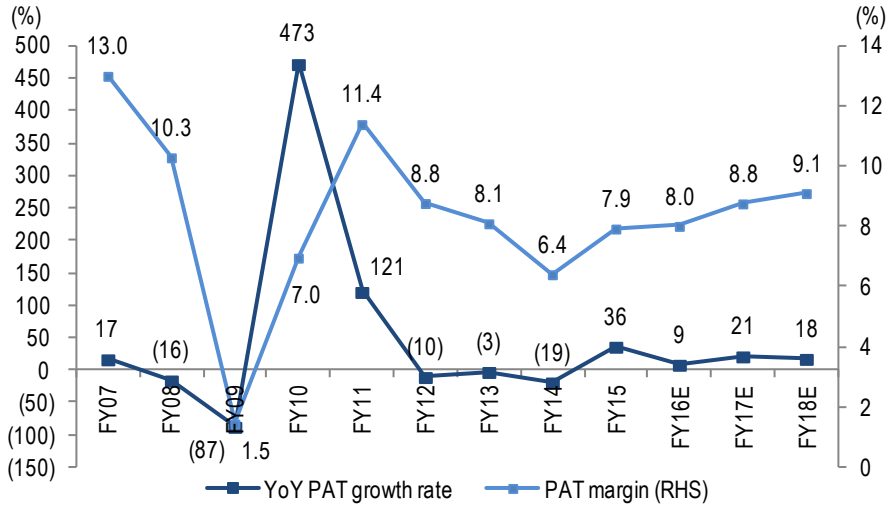


Source: Company, Nirmal Bang Institutional Equities Research

PAT is estimated to clock a CAGR of 16% over FY15-FY18E against 2.5% CAGR over FY12-FY15

NRB Bearings registered a PAT CAGR of 16% over FY10-FY15. In previous five years or FY05-FY10, PAT CAGR was negative at -2%. PAT growth in FY10-FY15 was led by ~300bps improvement in revenue CAGR from 10% over FY05-FY10 to 13% over FY10-FY15 and substantial decline in average blended tax rate by 1,000bps from 38% over FY05-FY10 to 28% over FY10-FY15. However, average PAT margin declined from 9.7% over FY05-FY10 to 8.3% over FY10-FY15 led by the fall in average EBITDA margin from 20% over FY05-FY10 to 18.2% over FY10-FY15. We expect PAT CAGR of 16% over FY15-FY18E against 3% over FY12-FY15. This higher growth will be led by revenue CAGR of 11% and stable average EBITDA margin at 17.5%, given the improvement in operating leverage likely over FY15-FY18E. Revenue growth will be led by likely revival in automotive segment's volume. Debt repayment and no large borrowing in the absence of major capex coupled with the fall in interest rates are likely to augur well for PAT growth.

Exhibit 19: PAT growth and PAT margin

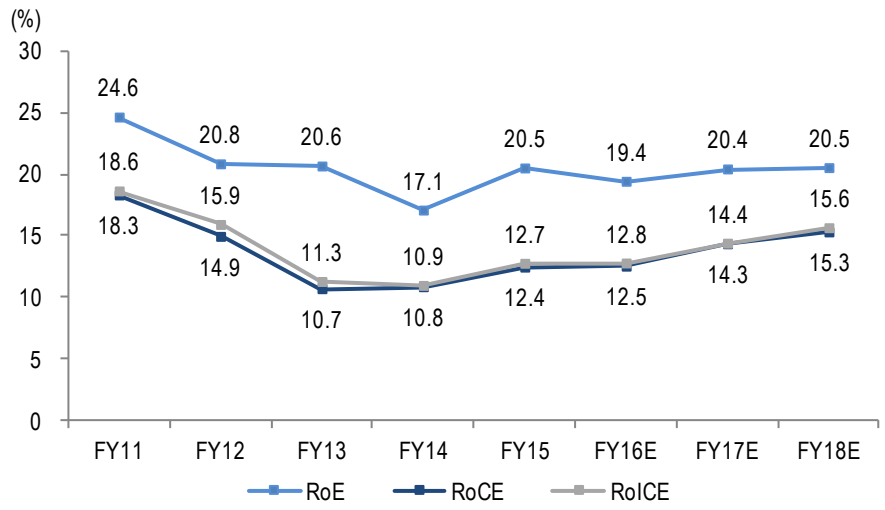


Source: Company, Nirmal Bang Institutional Equities Research

Return ratios are likely to inch up from FY17E even after declining in FY16E marginally

The key element which resulted in better return on equity (RoE) profile for NRB Bearings compared to its peers is leverage on its books, while others are debt-free. However, asset turnover has been lower, given the absence of revenue from traded goods, which is low capital-intensive. NRB Bearings' return on capital employed (RoCE) is on the lower end versus peers, despite better operating margin, as the company has lower asset turnover and higher working capital requirement sans revenue from low capital-intensive traded goods. We expect improvement in RoE and RoCE on account of margin expansion and improvement in asset turnover.

Exhibit 20: RoE, RoCE and RoICE

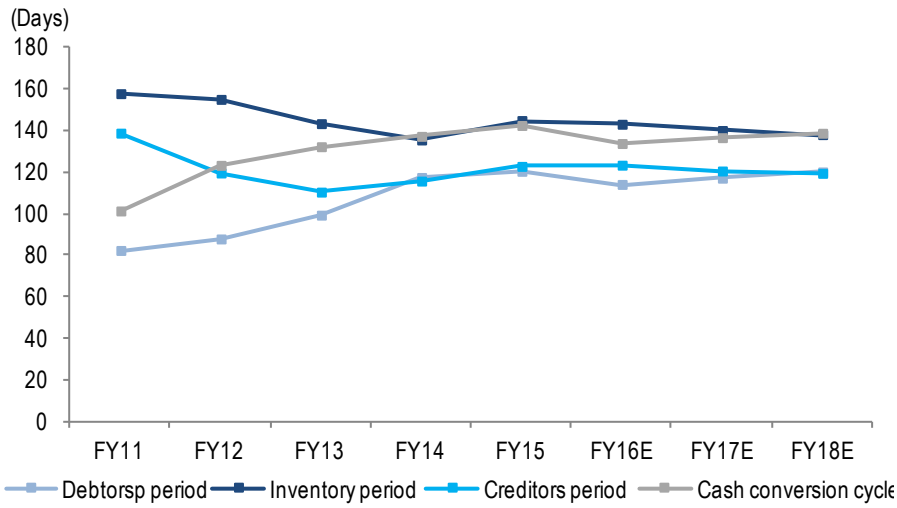


Source: Company, Nirmal Bang Institutional Equities Research

Working capital cycle is longest compared to peers

NRB Bearings' working capital cycle is longer than its peers, mainly because of higher inventory and debtors. The company has a higher proportion of revenue from exports to more than 20 countries. This warrants maintenance of higher inventory in different geographies. Moreover, NRB Bearings has more than 3,000 stock keeping units (SKUs) which are more than double that of peers. The company manufactures more of customised bearings as against standardised products and hence the company has to maintain higher inventory to quickly serve clients' requirements. Higher number of debtor days is on account of exports directly to clients, unlike its multinational peers who export to their parents. Unlike many other industries, NRB Bearings exports the bearings without receiving any advance payment or Letter of Credit (LC) from the client. This was on account of competitive nature of the business. Moreover, the billing cycle in case of exports is longer on account of logistics and the paper work involved. Revenue from after-market segment, which has a shorter debtor period, occupies a small share in NRB Bearings' revenue compared to peers.

Exhibit 21: Cash conversion cycle

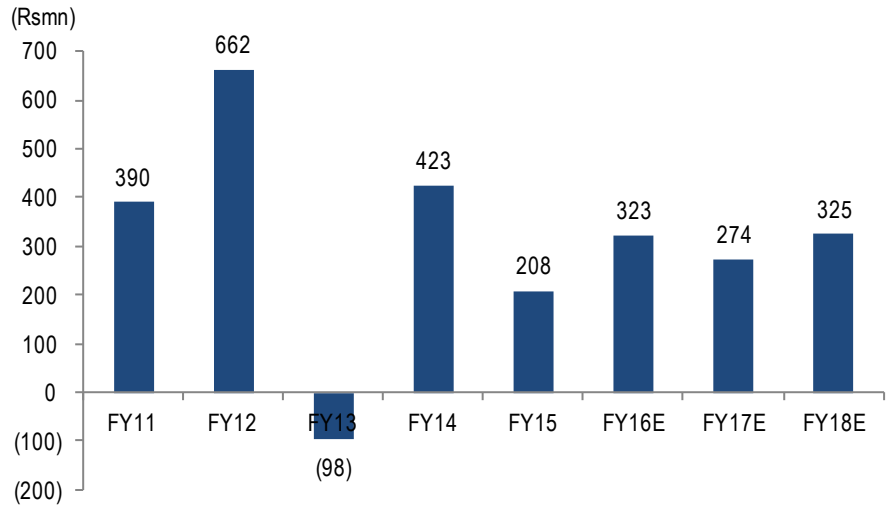


Source: Company, Nirmal Bang Institutional Equities Research

No major capex lined up in near future

The current capacity utilisation is in the range of 60%-70%. The company has given guidance that it has no major capex lined up for the next four to six quarters. However, routine capex will be there. NRB Bearings manufactures more than 95% of the parts required for bearings in-house. Moreover, the company has its own world-class R&D facility and is globally competent on technology and quality fronts. Hence, NRB Bearings has to incur regular investment in upgrading technology and on automation. In the past five years, over FY10-FY15, NRB Bearings undertook cumulative capex of Rs1.70bn. We expect routine capex for FY16E/FY17E/FY18E at Rs300mn/Rs250mn/Rs300mn, respectively.

Exhibit 22: Capex

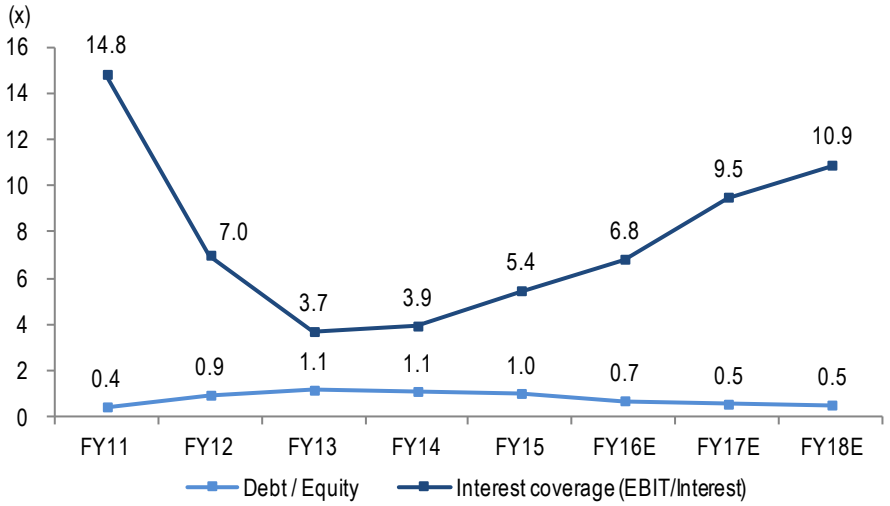


Source: Company, Nirmal Bang Institutional Equities Research

NRB Bearings has leverage on its books

NRB Bearings is the only leading listed player among top five bearing players in India having financial leverage on the books. (We believe Timken India is likely to have small debt on its books over FY16E-FY17E). On account of in-house production and R&D which requires recurring investments, NRB Bearings had to resort to borrowings. However, the leverage doubled in FY12 at 0.92x on account of demerger of industrial bearing business into a separate listed entity. However, the leverage did not increase much and remained at ~1x over FY12-FY15. In the absence of any major capex in near future and heavy repayment due in FY16E and FY17E, we expect financial leverage to decline and average at 0.57x over FY16E-FY18E against an average 1x over FY13-FY15.

Exhibit 23: Financial leverage and interest coverage

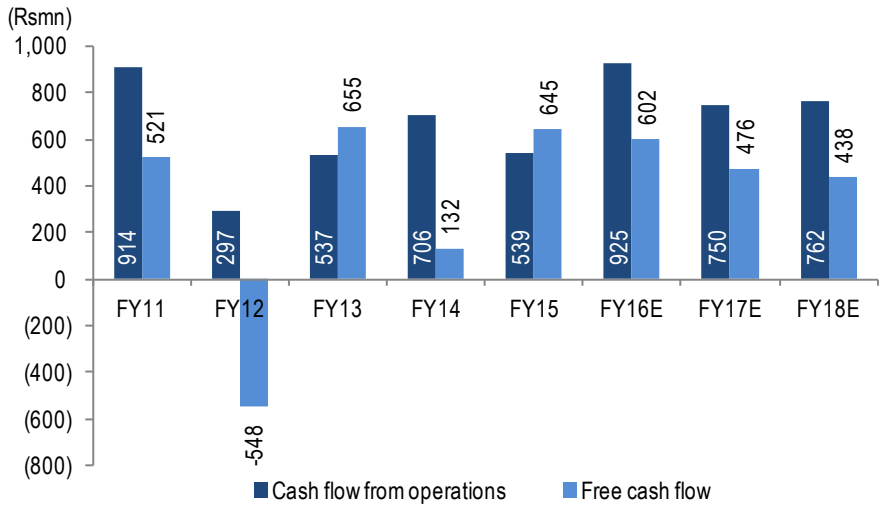


Source: Company, Nirmal Bang Institutional Equities Research

NRB Bearings to continue generating positive cash flow from operations

NRB Bearings has positive cash flow from operations since FY98. However, free cash flow post accounting for capex for respective year was positive for 12 years since FY98. The company generated cumulative cash flow from operations of Rs1.8bn over FY13-FY15. We expect cash flow from operations to remain positive till FY18E and cumulative generation to amount to Rs2.4bn over FY16E-FY18E. NRB Bearings also expects to generate cumulative free cash flow from operations of Rs1.5bn over the same period.

Exhibit 24: Operating cash flow / free cash flow



Source: Company, Nirmal Bang Institutional Equities Research

Outlook and valuation

NRB Bearings is the only leading listed player of Indian origin in domestic bearing industry which has strong export franchise. Exports contribute around one-fourth to revenue and it clocked a CAGR of 41% over FY10-FY15. The company earned the status of Tier I and Tier II supplier to global automotive OEMs and component manufacturers. It has in-house R&D and enjoys fully integrated manufacturing with the level of indigenisation at 95%. On account of own technology, NRB Bearings does not incur expenditure on royalty payment and trade mark fee unlike its multinational peers. The proportion of customised products in total revenue is very high, which translates into higher EBITDA margin compared to most peers in the industry. However, bearing is a highly capital-intensive sector with a low asset turnover ratio. Hence, NRB Bearings also has a low asset turnover, mainly because of lack of revenue from traded goods unlike multinational peers. The company enjoys strong relationships with clients and works with them right from platform development. The needle roller bearing segment accounts for ~10% of organised bearing market. NRB Bearings is the largest needle roller bearing player in India with segmental market share of ~70% and overall market share of ~7%. The company's philosophy is to focus on value addition and it prefers to do relationship-based transactions instead of engaging in intense price wars to grab volumes. It has decided not to compete in the price-driven sedan segment in PV category. The company clocked revenue CAGR of 13% over FY10-FY15 and earnings CAGR of 16% over the same period. As NRB Bearings is a pure play on automotive sector and 75% of its revenue comes from domestic market, the company's fortunes are closely linked to revival in automotive segment volumes. We expect a cyclical upturn in automotive volume and have estimated volume CAGR of 10% over FY15-FY18E, given the launch of new automotive models, improvement in the economy which leads to a rise in income level, lower interest rates and well-controlled inflation. Accordingly, we expect revenue CAGR of 11% over FY15-FY18E and PAT CAGR of 16% over the same period. We also estimate exports to post a CAGR of 13% over FY15-FY18E. It should also be noted that given the anticipated recovery in automotive sales, NRB Bearings' average one-year forward P/E multiple inched up in recent years. We project revenue CAGR of 11% and PAT CAGR of 16% over FY15-FY18E, led by likely revival in domestic automotive sector and sustained strong exports. We have assigned Buy rating to the stock with a target price of Rs167, which discounts FY18E EPS of Rs 8.3 by 20x.

Key risks

NRB Bearings' revenue dominated by automotive OEMs

Although a sizable presence in OEM category gives immunity from competition at large to NRB Bearings, it has its own problems like stringent quality norms, lower pricing power, tighter deliver schedule etc. As the company has more of customised products, it has to maintain a higher level of inventory for domestic as well as overseas clients. Moreover, cyclical downturn in automotive sector will have a higher impact on companies which draw a major portion of their revenue from OEMs.

Threat from cheap bearing imports and competition from global players

The import of needle roller bearings is not as rampant as ball bearings because manufacturing needle roller bearings requires a higher level of technological competence. However, global leaders in this category like INA (Schaeffler group company, Germany) and Nadella (France) are looking at India as an upcoming market. In fact, we have been given to understand that INA is a very active competitor to NRB Bearings.

Raw material price volatility

We have been given to understand that the contracts with OEMs do not have mechanism of raw material price hike pass-through. The companies have to negotiate with OEMs for the same. Raw material costs generally range between 35%-45% of revenue. The major raw material is steel.

Bearings manufacturing is capital-intensive business

Bearing is an important component and assumes more importance in wake of the drive undertaken by automotive OEMs to reduce the weight of the vehicle, reduce emission, improve mileage and reduce vibration. Hence, bearings companies need to invest on a regular basis to upgrade technology and install a capacity to cater to large demand pool.

NRB Bearings' exports are mainly to Europe and its revenue is exposed to forex fluctuations

Any adverse movement in exchange rate will take a toll on revenues and margins of NRB Bearings. In 1QFY16, Euro depreciation had an adverse effect on revenues and margins of the company.

Financials

Exhibit 25: Income statement

Y/E March (Rsmn)	FY14	FY15	FY16E	FY17E	FY18E
Net revenue from	5,822	6,426	6,904	7,671	8,686
Other operating income	123	130	131	145	161
Revenue from operations	**5,945**	**6,556**	**7,036**	**7,816**	**8,846**
Other income	46	36	36	37	37
Total revenue	**5,991**	**6,592**	**7,072**	**7,853**	**8,883**
Cost of RMI consumed	2,351	2,680	2,902	3,178	3,599
Purchase of stock-in-trade	-	-	-	-	-
Change in inventory	72	(6)	(30)	(12)	(10)
Employee benefit expenses	924	1,011	1,123	1,246	1,383
Other expenses	1,592	1,723	1,833	2,033	2,308
Total expenses	**4,939**	**5,408**	**5,827**	**6,445**	**7,281**
EBITDA	**1,006**	**1,148**	**1,208**	**1,371**	**1,565**
Depreciation	333	283	304	317	337
EBIT	**673**	**864**	**904**	**1,055**	**1,228**
Financial charges and interest	172	159	133	111	113
PBT (before exceptional items)	**547**	**742**	**807**	**980**	**1,153**
Exceptional items	-	-	-	-	-
PBT	**547**	**742**	**807**	**980**	**1,153**
Total tax	165	221	242	294	346
Profit after tax	**382**	**521**	**565**	**686**	**807**

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 26: Cash flow

Y/E March (Rsmn)	FY14	FY15	FY16E	FY17E	FY18E
EBIT	673	864	904	1,055	1,228
(Inc.)/dec in working capital	(200)	(448)	(61)	(357)	(481)
Other income	46	36	36	37	37
Depreciation	333	283	304	317	337
Tax paid (-)	(165)	(221)	(242)	(294)	(346)
Inc/(dec.) in other long-term liabilities	32	44	-	-	-
(Inc)/dec.in long-term assets (-)	(12)	(19)	(16)	(7)	(13)
Net cash flow from operations	**706**	**539**	**925**	**750**	**762**
Capital expenditure (-)	(574)	106	(323)	(274)	(325)
Net cash flow after capex	**132**	**645**	**602**	**476**	**438**
(Inc.)/dec. in invest. & non- current assets	15	-	48	20	(54)
(Inc)/dec. in current investment	5	13	-	-	-
Cash flow from investment activity	**(554)**	**119**	**(275)**	**(254)**	**(379)**
Interest paid (-)	(172)	(159)	(133)	(111)	(113)
Dividends paid (-)	(124)	(170)	(175)	(175)	(175)
Inc./(dec.) in short-term borrowing	147	74	(526)	221	150
Inc./(dec.) in long-term borrowing	18	72	(74)	(408)	31
Cash flow from financial activities	**(130)**	**(183)**	**(909)**	**(473)**	**(107)**
Others	(6)	(255)	-	-	-
Opening cash balance	35	51	272	13	35
Closing cash balance	**51**	**272**	**13**	**35**	**312**
Change in cash	16	221	(259)	23	276

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 27: Balance sheet

Y/E March (Rsmn)	FY14	FY15	FY16E	FY17E	FY18E
Share capital	194	194	194	194	194
Reserves and surplus	2,173	2,523	2,913	3,424	4,056
Net worth	**2,367**	**2,717**	**3,107**	**3,618**	**4,249**
Non-current liabilities	**1,115**	**1,235**	**1,160**	**752**	**783**
Deferred tax liabilities (net)	115	111	111	111	111
Long-term borrowings	922	994	919	511	542
Other long-term liabilities	32	75	75	75	75
Long-term provisions	47	55	55	55	55
Current liabilities	**3,134**	**3,342**	**2,891**	**3,197**	**3,471**
Short-term borrowings	1,645	1,719	1,193	1,414	1,564
Trade payables	767	899	970	1,045	1,173
Other current liabilities	564	543	543	543	543
Short-term provisions	158	181	185	195	190
Total	**6,616**	**7,293**	**7,158**	**7,566**	**8,503**
Total gross block	4,902	5,110	5,433	5,706	6,031
Accumulated depreciation	2,876	2,900	3,204	3,521	3,858
Net fixed assets	**2,026**	**2,210**	**2,228**	**2,185**	**2,173**
Capital work in progress	330	16	16	16	16
Non-current Investments	194	193	146	126	180
Long-term loans and advances	293	312	328	335	348
Current assets	**3,773**	**4,562**	**4,440**	**4,905**	**5,786**
Current investments	15	3	3	3	3
Inventories	1,315	1,495	1,595	1,729	1,931
Trade receivables	1,911	2,161	2,197	2,505	2,908
Cash and carry equivalents	51	272	13	35	312
Short-term loans and advances	481	631	631	631	631
Other current assets	0	1	1	1	1
Total	**6,616**	**7,293**	**7,158**	**7,566**	**8,503**

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 28: Key ratios

Y/E March	FY14	FY15	FY16E	FY17E	FY18E
Per share (Rs)					
EPS	3.9	5.4	5.8	7.1	8.3
CEPS	7.4	8.3	9.0	10.3	11.8
BVPS	24.4	28.0	32.1	37.3	43.8
DPS	1.1	1.5	1.5	1.5	1.5
Dividend payout (%)	27.9	27.9	25.7	21.2	18.0
Valuation (x)					
P/E	35.5	26.1	24.0	19.8	16.8
P/BV	5.7	5.0	4.4	3.8	3.2
EV/EBITDA	16.0	14.0	13.0	11.3	9.8
M-cap/ sales	2.3	2.1	1.9	1.7	1.5
EV/sales	2.7	2.4	2.2	2.0	1.7
Return ratios (%)					
RoANW	17.1	20.5	19.4	20.4	20.5
RoACE	10.8	12.4	12.5	14.3	15.3
RoAIC	10.9	12.7	12.8	14.4	15.6
Margins (%)					
EBITDA margin	16.9	17.5	17.2	17.5	17.7
EBIT margin	11.3	13.2	12.8	13.5	13.9
Tax/PBT	30.2	29.8	30.0	30.0	30.0
Net profit margin	6.4	7.9	8.0	8.8	9.1
Expense ratios (% of revenue)					
Cost of raw materials consumed	40.8	40.8	40.8	40.5	40.6
Traded goods	0.0	0.0	0.0	0.0	0.0
Employee benefit expenses	15.5	15.4	16.0	15.9	15.6
Total expenses	83.1	82.5	82.8	82.5	82.3
Turnover and working capital ratios					
Debtor period (days)	117	120	114	117	120
Inventory period (days)	135	145	143	140	138
Creditor period (days)	116	123	123	120	119
Cash conversion cycle (days)	137	142	134	137	139
Fixed asset turnover (x)	1.3	1.3	1.3	1.4	1.5
Non cash net working capital(Rsmn)	588	949	1536	1673	2004
Solvency ratios (x)					
Debt / equity	1.08	1.00	0.68	0.53	0.50
Interest coverage	3.92	5.45	6.81	9.50	10.89

Source: Company, Nirmal Bang Institutional Equities Research

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SKF India

4 Janaury 2016

Reuters: SKFB.BO; Bloomberg: SKF IN

Initiating Coverage

Gears Up For Growth

SKF India (SKF) is determined to regain its market share in passenger vehicle or PV segment as it won some new contracts to supply GEN3HUB (third generation) bearings. The company successfully qualified for railway business for the freight application bearings. Introduction of Antilock Braking System (ABS) in commercial vehicles or CVs from October 2015 and the government's recent decision to make ABS applicable to two-wheelers above 125cc engine capacity as well from April 2017 is likely to augur well for SKF India. The company remains the most diversified play, retaining its top position with largest share of ~28% in domestic organised bearing market. This is led by a whopping ~45% market share in the largest category - ball bearing (~55% of bearing industry). SKF India has a strong presence in after-market segment despite a higher proportion of spurious products circulating there. With technology proficiency, recent contract wins from original equipment manufacturers or OEMs, focus on complementing bearings with other services/products from the parent company's stable and likely broad-based revival in India's economy, we believe SKF India will tide over near-term headwinds. Likely revival in the economy over the next few quarters coupled with a few positive signals from CV and PV segments on the automotive side augurs well for SKF India. However, SKF India will continue to look for market share gains, which may be at the cost of margins. Therefore, despite further gains likely from lower commodity prices, overall margin trajectory may remain stable at 11.6%. We expect the company's revenue to clock a CAGR of 9% over CY14-FY18E against 4% in CY10-CY14. Likely improvement in operating leverage, favourable revenue mix, increase in the proportion of traded goods from Ahmedabad plant and a well-controlled working capital cycle may lead to a PAT CAGR of 10.0% over the same period. We have assigned Accumulate rating to the stock with a target price of Rs1,290 based on 25x FY18E EPS of Rs51.6.

To qualify for business from railways but DFC, metro rail projects widen opportunity: From FY18, SKF will qualify as an equal player along with Timken India, National Engineering Industry (NEI) and other players, if any, for the annual Rs6bn railway freight application business. Opportunity net gets widen with Dedicated Freight Corridor or DFC project on the cards and expansion of metro rail network in a number of cities.

Geared up to regain market share in passenger vehicle OEM segment: SKF India won new passenger vehicle OEM contracts for GEN3HUB (third generation) bearings which are to be executed from 4QFY17. The company expects to recover a major portion of 700bps loss in market share which it suffered in this segment without this product. However, in two-wheeler segment, the company voluntarily let go some of its market share, given the lower-than-expected margins in lower cc (engine capacity) segment.

Y/E March (Rsmn)	CY13	CY14	FY16E*	FY17E	FY18E
Revenue	22,750	24,156	30,005	27,489	31,411
YoY (%)	*2.1*	*6.2*	*19.4*	*(8.4)*	*14.3*
EBITDA	2,612	2,832	3,330	3,194	3,645
EBITDA (%)	*11.5*	*11.7*	*11.1*	*11.6*	*11.6*
Adj. PAT	1,667	2,028	2,284	2,321	2,720
YoY (%)	*(12.3)*	*21.6*	*10.1*	*1.6*	*17.2*
FDEPS (Rs)	31.6	38.5	34.6	44.0	51.6
RoE (%)	*13.7*	*15.1*	*15.2*	*13.9*	*14.7*
RoIC (%)	*16.2*	*17.0*	*19.2*	*20.5*	*26.1*
P/E (x)	38.9	32.0	35.5	27.9	23.8
EV/EBITDA (x)	23.4	21.0	21.3	16.7	13.9

Note: * FY16E numbers are for 15 months ending March 2016. However, EPS, YoY growth and EV/EBITDA rates are annualized; *Source: Company, Nirmal Bang Institutional Equities Research*

ACCUMULATE

Sector: Industrial Goods

CMP: Rs1,229

Target Price: Rs1,290

Upside: 5%

Sameer Panke
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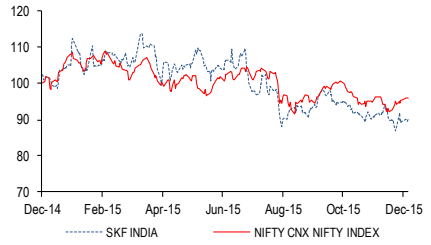
+91-22-3926 8114

Key Data

Current Shares O/S (mn)	52.7
Market Cap (Rsbn/US$mn)	64.8/982.1
52 Wk High /Low (Rs)	1,540/1,158
Daily Volume (3M NSE Avg.)	22,911

Shareholding (%)	4QFY15	1QFY16	2QFY16
Promoter	53.6	53.6	53.6
FII	10.8	8.0	12.3
DII	21.1	24.0	20.0
Others	14.5	14.4	14.1

One-Year Indexed Stock Performance

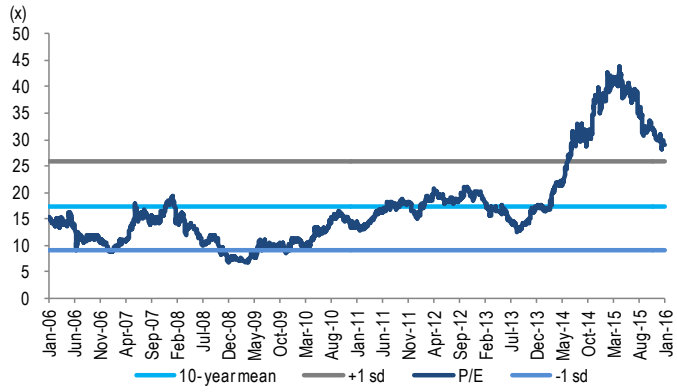


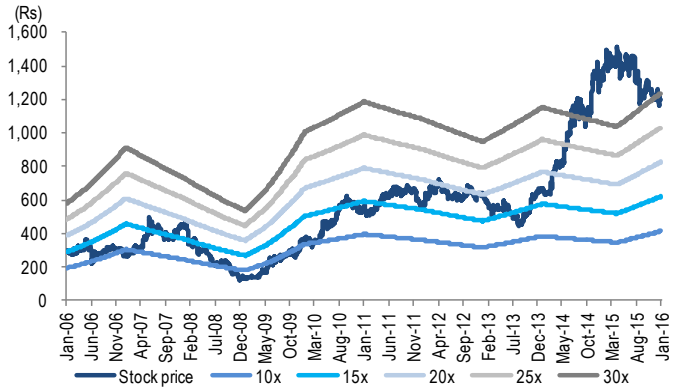
Price Performance (%)

	1 M	6 M	1 Yr
SKF India	(2.0)	(15.1)	(12.2)
Nifty Index	(0.2)	(5.4)	(4.0)

Source: Bloomberg

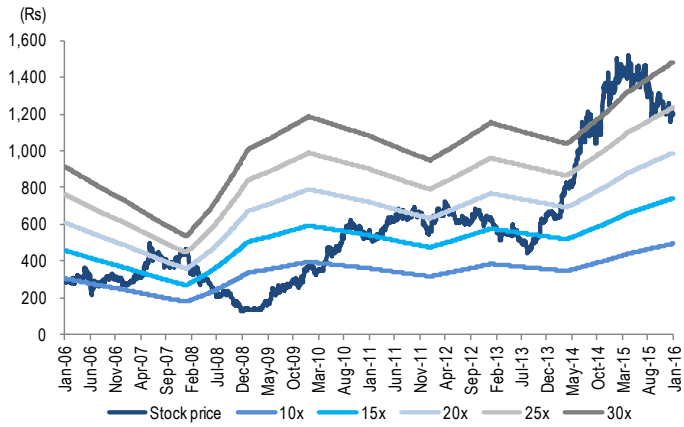
Exhibit 1: One year forward P/E chart





Source: Nirmal Bang Institutional Equities Research

Exhibit 2: Two year forward P/E chart



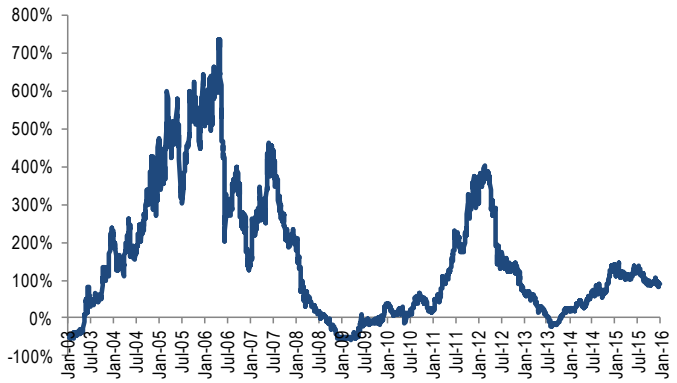
Source: Nirmal Bang Institutional Equities Research

Exhibit 3: Average PE

Particulars	1 year forward			2 year forward		
(x)	3 year average PE	5 year average PE	10 year average PE	3 year average PE	5 year average PE	10 year average PE
SKF India	26.4	22.8	17.4	23.6	21.4	16.7

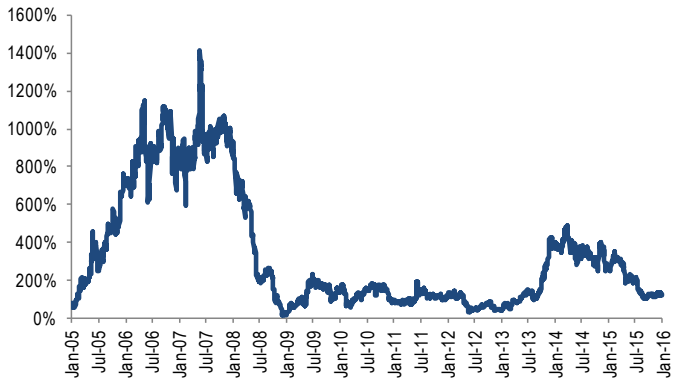
Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 4: Three year rolling return



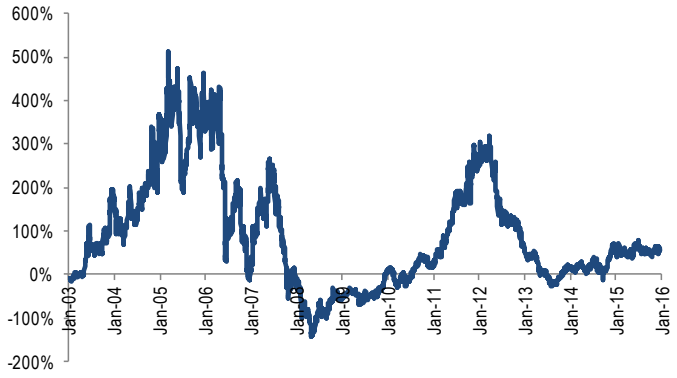
Source: Nirmal Bang Institutional Equities Research

Exhibit 5: Five year rolling return



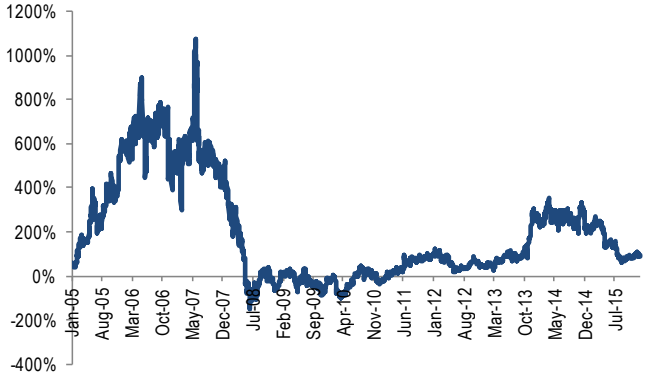
Source: Nirmal Bang Institutional Equities Research

Exhibit 6: Three year Alpha



Source: Nirmal Bang Institutional Equities Research

Exhibit 7: Five year Alpha



Source: Nirmal Bang Institutional Equities Research

Investment Rationale

SKF India is a diversified play and proxy to domestic industrial and economic growth

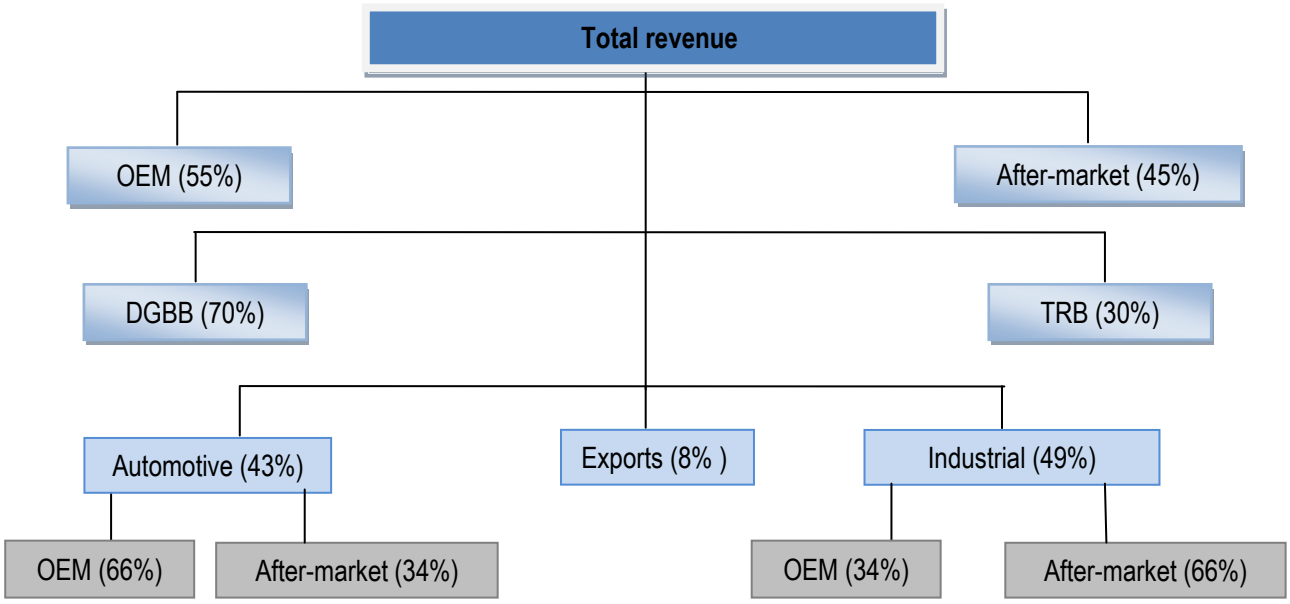
SKF India is the largest player in bearings in India with its latest overall revenue market share at ~28%. The company has its presence in more than 40 industries and also across all bearing products. We believe the company has gained a 685bps market share over the past 10 years. This is despite losing market share since 2009 in PV segment on account of lack of a GEN3HUB (third generation) bearings. Traction in industrial segment and a large distribution network in after-market segment led to overall market share gain. The company also has the distinction of being the largest player with ~45% revenue market share in the largest category of bearings i.e. deep groove ball bearing (DGBB) market which has ~55% share in overall bearing market. The largest overall market share can be attributed to: a) The widest range of product offerings and presence in a large number of industries, b) Strong relationships with OEMs which are bulk buyers and provides volume in automotive sector and other industrial sectors, and c) Maximum reach in after-market segment through a vast network of 250 distributors and more than 20,000 retailers. This network is largest among top four listed players in bearing space. Sheer size and reach of SKF India to different industries makes it proxy to domestic manufacturing capex.

The company's revenue CAGR over CY09-CY14 was 9%. However, over CY04-CY09, SKF India clocked its highest revenue CAGR of 22%. In this period, the domestic economy was firing on all cylinders with real gross domestic product or GDP growth averaging 8% and Index of Industrial Production or IIP growth averaging ~6%. There is a decent correlation between these two economic data series and bearing industry's growth.

The bearing industry is cyclical in nature. SKF India has shown strong resilience during the recent downturn by clocking a revenue CAGR of 9% over CY09-CY14 during which real GDP growth dropped to an average 6.7% and IIP to 3.8%.

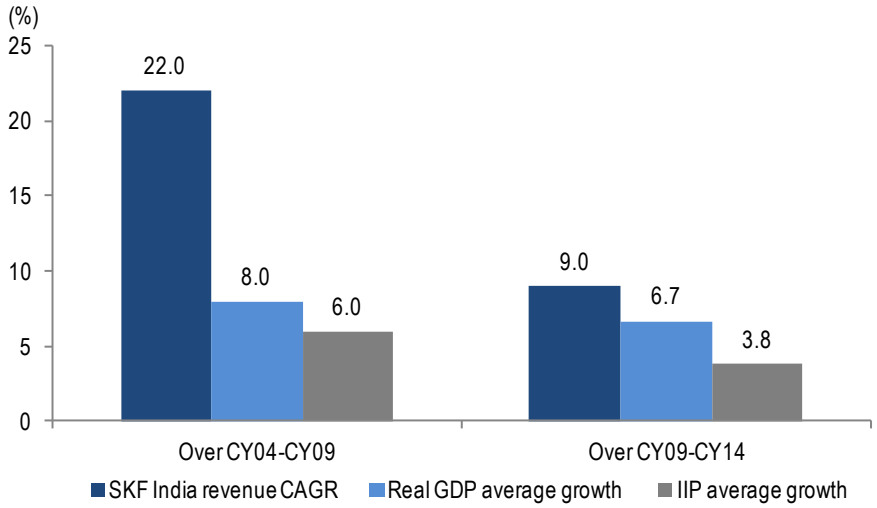
We expect SKF India's revenue to post a CAGR of 9% over CY14-FY18E.

Exhibit 8: Revenue break-up



Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 9: Real GDP average growth rate, IIP average growth rate and SKF India's revenue CAGR

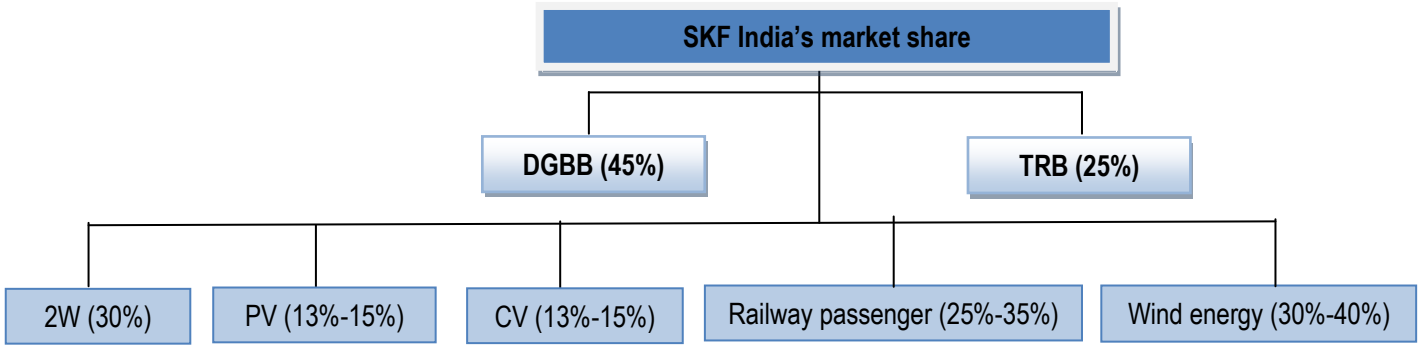


Source: Company, Central Statistical Organisation or CSO, Nirmal Bang Institutional Equities Research

SKF India features among top three players in most bearing categories and user segments

SKF India is a broad-based play on Indian bearing industry. This makes it least susceptible to downturn in any particular industry as compared to peers. Moreover, no customer segment or customer contributes more than 10% to the company's revenue. SKF India has the largest overall market share of ~28% and features among top three players in each category of bearings and user segments it is present in.

Exhibit 10: Market share



Source: Company, Nirmal Bang Institutional Equities Research

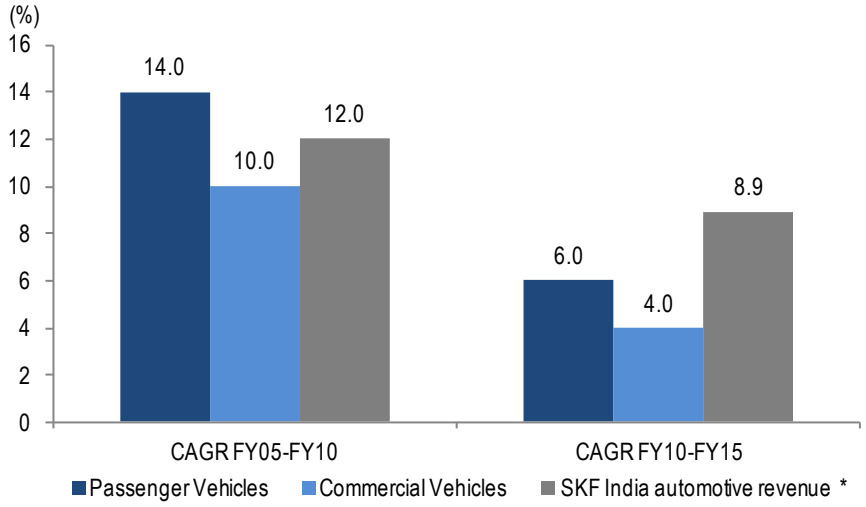
Gears up to regain market share in PV segment through new GEN3HUB bearing contracts

SKF India used to command a 20% market share in PV segment. However, in 2009, the company lost substantial market share to its nearest rival (we believe its FAG) sans third generation bearings. The domestic PV segment moved to third generation bearings by that time. However, the company took corrective steps and added third generation bearings to its product stable. SKF India is now geared up to regain lost market share from 13% currently. The company has entered into new contracts with PV OEMs in the second round of award of contracts. The largest player within this is Maruti Suzuki India. This will allow SKF India to grab higher share than the current 10%-12%, of Maruti Suzuki India's business. We have been given to understand that the new product range will be priced 2.0x-2.5x above existing GEN1HUB (first generation) bearings and is likely to have better margins. The delivery of these bearings is scheduled from December 2016. Therefore, new product addition and hopes of regaining lost market share can potentially lead to double-digit revenue growth in PV segment. SKF India has also won some interesting contracts from Mahindra & Mahindra, which augurs well going forward. In two-wheeler space also, it has the same story. However, in two-wheeler segment the company voluntarily let go some of its market share given the lower-than-expected margins in lower cc (engine capacity) space. Therefore, estimated higher growth from PV and CV segments will be partially offset by weak two-wheeler segment's performance. On CV front, SKF India recently introduced TRB bearings with a 300,000km warrantee, which is almost a 10x increase in warranty period. Net product revenue CAGR of SKF India over CY09-CY14 dropped to single-digit at 9%, which can be mainly attributed to the decline in revenue from PV segment. For CY14-FY18E, we expect it to marginally improve to 9.2%

Automotive sector expected to move to double-digit growth mainly led by CV and PV segments

Automotive sector was struggling for growth in recent years owing to various factors like the rise in interest rates, higher fuel costs, general slowdown in the economy and sluggish exports on account of subdued demand globally. PV and CV segments faced the maximum brunt with the volume CAGR declining from 14%/10%, respectively, over FY05-FY10 to 6%/4%, respectively, over FY10-FY15. SKF India reported revenue CAGR of 22% and 9%, respectively, during those phases. This clearly indicates that its revenue is highly tied to underlying volume growth in PV and CV segments. However, there is a multiplier effect on revenue growth rate of SKF India, ranging between 1.5x to 2.0x of underlying PV and CV volume growth rates, respectively. Automotive segment revenue (including exports) accounts for around 48% to 52% in total revenue. There are expectations of revival in automotive segment led by CV and PV segments as these segments have been showing some signs of arresting negative growth. PV segment reported a 7% YoY growth for 9MCY15 against annual growth rates of -4.4% and 4.3% for FY14 and FY15, respectively. During the same period (9MCY15), CV segment (including tractors) grew 7% YoY. Moreover, declining interest rates, subdued fuel prices and expected improvement in GDP growth may result in mid-teen volume growth over FY15-FY18E for PV and CV segments.

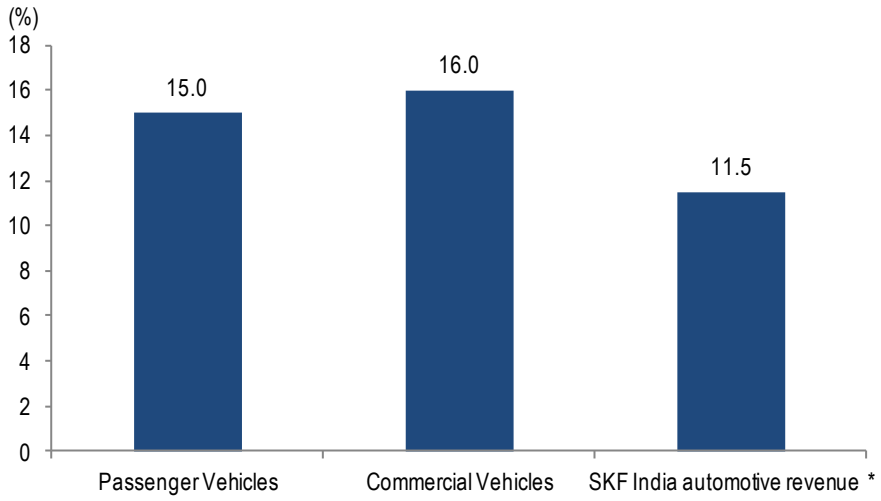
Exhibit 11: PV segment/CV segment/SKF India revenue CAGR over FY05-FY10 and FY10-FY15



Note: * SKF India's revenues are for CY04-CY09 and CY09-CY14

Source: Company, Society of Indian Automobile Manufacturers or SIAM, Nirmal Bang Institutional Equities Research

Exhibit 12: PV segment/CV segment/SKF India's revenue CAGR over FY15-FY18E



Note: * = SKF India revenue is from CY14-FY18E

Source: Company, SIAM, Nirmal Bang Institutional Equities Research

Various qualitative aspects in automotive segment expected to augur well for SKF

SKF India is experiencing the emergence of a serious dialogue within automotive OEMs to take technology forward for widespread deployment and rather restricting to a niche area. This is expected to improve the product mix of SKF India. Moreover, Hub Grid wheel bearings, ABS in CVs and two-wheelers, acceptance of SKF India's lubrication solutions in medium and heavy commercial vehicle or MHCV segment augurs well for the company. Further, it sees more and more PVs moving to GEN3HUB (third generation) bearings. The way technology is taking centre stage in terms of warranty programmes of automotive OEMs, SKF India - being the largest player across the value chain in OEM segment - will be a natural beneficiary.

Foray in railway freight application bearing segment - StopGo and ABS to open up new opportunities

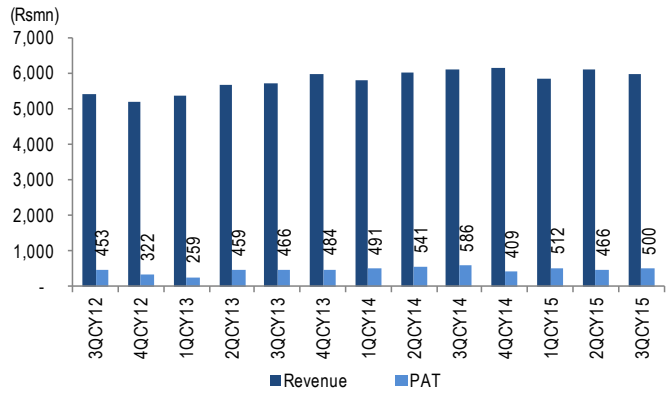
SKF India has qualified for supplying high-margin freight application bearings to Indian Railways from CY15. Order execution will start from January-March 2016 quarter as there has been some delay. However, the big opportunity in annual Rs6bn railway freight application market will be open from FY18 when the company will get a level-playing field with other vendors like Timken India, NEI etc. Improvement in technology and new applications like ABS StopGo, Hub Grid solutions etc. have clearly put leading multinational players like SKF India in an advantageous position. Issuance of different warranty/guarantee for components and mileage by automotive OEMs, and the drive to reduce weight along with emission reduction will force technology change in bearing business.

SKF India shows resilience to near-term headwind of subdued economic conditions

The current business environment is marred by liquidity crunch across industrial sectors coupled with subdued demand outlook in the near term. In automotive segment, only MHCV and PV segments are showing some positive signs. In industrial segment, barring railways and to certain extent wind energy, none of the sectors have shown any uptick. In fact most of them registered a decline. SKF India had to go for production cut of 10% in the June 2015 quarter to liquidate excess inventory build-up in the March 2015 quarter. Moreover, it had lower-priced but strategic orders from wind energy and railway segments, but they were executed before March 2015. However, over a slightly longer time span – September 2012-September 2015 - the company showed resilience as its quarterly revenue and PAT clocked CQGR of 1% each, with average quarterly revenue and PAT at Rs5.80bn and Rs458mn, respectively. EBITDA margin averaged 11.2% during the same period and, barring two occasions, remained in double-digits.

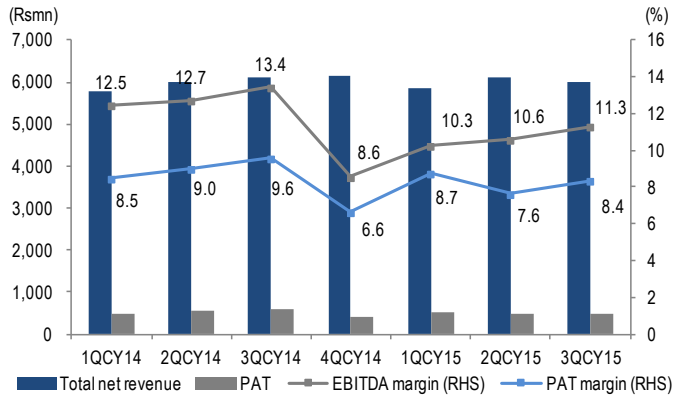
As per our view, some pricing gains and cost rationalisation measures along with the strong presence of SKF India in after-market segment provides it cushion from cyclicality in OEM business. The after-market business occupied ~45% share in revenue on a sustained basis over the past few years. Moreover, the company started focusing on providing other allied services to customers which has increased its presence at clients' premises and improved its engagement with clients. This has given advantage to SKF India and also the opportunity to get associated with clients from early stage of development. SKF India's management shared the optimism, given the fact that none of its clients are panicky or seeing a negative trend in future and are hopeful of a revival, but the timing is uncertain. The user industry is expecting the revival process to begin in a few quarters.

Exhibit 13: Sequential quarters revenue and PAT performance



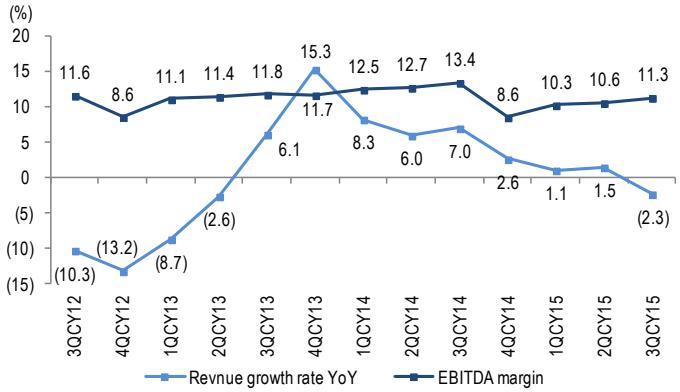
Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 14: Sequential quarters margin performance



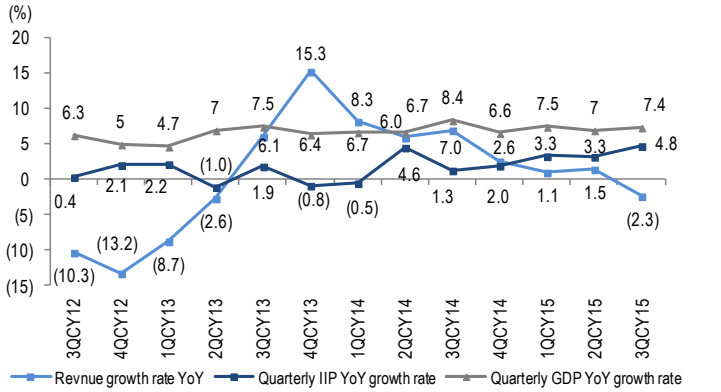
Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 15: Sequential quarters revenue growth and margin



Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 16: Recent quarters underperformance against IIP/GDP



Source: CSO, Company, Nirmal Bang Institutional Equities Research

SKF group's philosophy is the unit that can manufacture the product at best cost should do it

SKF India has certain advantages in terms of cost which makes it possible for the company to export its products to automotive OEMs in developed countries like Germany, Sweden and North America. However, there is no agenda of its parent to make SKF India more competitive. SKF India has to become competitive on its own. The SKF group has a global system and if SKF India has the best cost-point, the parent will import bearings from the Indian entity, subject to client approval because it is an important angle in this business. The philosophy of SKF group is that the unit or plant which has necessary technical competence to manufacture a particular product at best cost should do it. SKF group's manufacturing philosophy is not to use China and India as low-cost manufacturing bases and go ahead lock, stock and barrel to produce bearings for exports. The SKF group believes that each region should produce what is required locally. There is a concept of best-cost country as well. No banner statement like low-cost manufacturing destination works for SKF India. It exports a particular range of TRBs for passenger vehicles to Europe and the US which it can only manufacture at lowest cost within the SKF group globally. We have also been given to understand that SKF China and SKF Indonesia do not manufacture the kind or type of bearings which SKF India exports. Hence, there is no overlapping of products and competition from SKF China and SKF Indonesia.

For SKF India, it's no longer only hardware sales, but the aim is to become an end-to-end solution provider

SKF India is the largest player in organised bearing market in India. The company is no longer focusing on hardware sales alone, but also on service sales. SKF India has developed the ability to integrate the platform that it gets from clients. It is determined to move beyond bearings to include seals, lubricants, mechatronics, refurbishment and maintenance services as part of the offerings. This allows it to increase pricing power with customers. Hence, SKF Indias' strong application engineering, strong product development, strong pedigree and also experience to perform under different conditions of operations makes a value proposition for clients.

Business model is flexible to accommodate new technologies, products and services

Various steps have been taken by SKF India to remain afloat in turbulent times and grow ahead of the industry during the recovery period. SKF India's parent has been the leader globally in pioneering various technologies. It has applied for hundreds of patents and also there are quite a few patents registered in its name. The business model is flexible to accommodate new technologies, products and services. Over a period of time, the company dropped many products from its portfolio and reintroduced them when the demand revived. To cite an example, SKF India was out of ceiling fan bearing business for some time, but it has now reintroduced them with the demand making a comeback. SKF India manufactures condition monitoring system currently. This product is contributing Rs200mn to revenue currently. SKF India is also evaluating addition of remote monitoring services. The SKF group is very strong in this globally and SKF India has just commissioned its first prototype in India. The company is watching the results and it will then decide to bring in this product. SKF India also manufactures MacPherson suspension bearing units at Pune. These are high-end bearings and it will take a while for Indian automotive industry to adopt them. SKF India will supply if the demand emerges from India.

Focus on indigenisation and after-market segment to de-risk forex shock and revenue from OEMs

SKF India has initiated steps to increase indigenisation of industrial bearings which assist in reducing costs and lead time of product delivery. The company's eligibility for freight application bearings in railway segment expanded the opportunity net beyond more than 40 industries in which it is present in India. For automotive segment, addition of new technology products like sensor bearings used in ABS, StopGo, GEN3HUB Grid wheel bearings etc, provide high-entry barriers for competitors. Power transmission and engines are the two areas in automotive segment where the company is now focusing and where there are more and more offerings. SKF India has realised the potential of after-market segment and expanded its distribution network to become the largest organised player in after-market segment. It has more than 250 distributors and over 20,000 retailers across India. Moreover, the company has a tie-up with Bosch through which SKF India's bearings are available at over 3,000 Bosch service stations across India.

Availability of spare land and buildings to shorten the period for capacity expansion

SKF India's approach towards capex is judicious and it is planning to do it in such a way that any enhancement of capacity, either by brownfield or greenfield expansion, is possible at the maximum in a year's time as spare land and buildings are available. If SKF India does not see any economic sense or business case for manufacturing a particular product, it will source that product from SKF group entities either in India or overseas. In India, there is no overlap of products and services between an unlisted group company and the listed entity.

SKF India pays royalty and trademark fees only on manufactured products and is payable in Indian rupees which makes it free from the risk of forex fluctuations. However, being a net importer, it is vulnerable to forex risk.

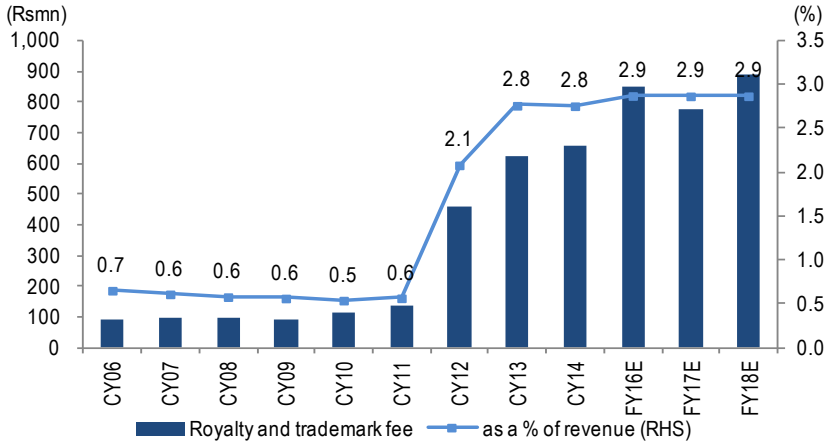
SKF India parent's sensor bearings are useful for a wide range of advanced applications

SKFIndia parent's sensorised bearing unit – which integrates sensor, impulse ring and bearing – is a compact solution to record movement data for machine control. Data includes a number of revolutions, speed, direction of rotation and relative position, as well as acceleration or deceleration. These intelligent bearings are now in operation worldwide, providing high-quality signal generation and transmission. These bearings are developed jointly with **Swiss company Sécheron**, specialist in data acquisition and handling of safety-relevant information. What makes SKF India parent's solution unique is that the sensor also can send a vibration signal to an onboard processor to build a history of component condition and warn of an impending bearing or wheel problem or a derailment condition. SKF India's parent is also a key supplier to high-speed trains in Europe. The sensor signals from the bearing units will be used for anti-skid braking system, automatic train control and for security system of doors. In India, SKF India makes sensorised bearings at a very small level and is supplying to niche PVs and two-wheelers. This segment is expected to pick up with the demand for more sophisticated technology.

SKF India pays royalty/trademark fees in Indian rupees for technology support from parent

The parent has increased its allocation to R&D (research and development) by nearly 100bps to ~3% as of CY14 over the past five years. This technology is available to SKF India by paying royalty and trademark fees on domestically manufactured products. Till 2011, SKF India used to pay 1.5% on overall sales of all own manufactured goods and used to bear the share of costs of common resources deployed or used worldwide who work beyond the country in which they have been employed. However, the royalty arrangement underwent a change from January 2012. The SKF group has changed the transfer pricing policy and the parent company has assumed the role of entrepreneur owner and local companies in various countries became contract manufacturers. As a result, these entities started getting paid the fixed costs incurred plus fixed margins and the parent company started retaining residual profit as an entrepreneur owner. But in countries like India and China where exchange regulations does not allow such kind of model, SKF India became a licensed manufacturer for the parent company, paying royalty for technology support and fees for use of trademarks. The royalty and trademark fees put together in CY12/CY13/CY14 were 2.02%/ 2.73%/ 2.71% of total net revenue. The royalty and trademark rates are 3% and 2%, respectively, as a percentage of manufactured products. The rates remained unchanged since 2012. We have been given to understand that its an open agreement and there is no periodicity for change in rates. The royalty is calculated in Indian rupee terms. Therefore, it is a rupee liability. Hence, SKF India has no forex risk on royalty/trademark payments.

Exhibit 17: Royalty and trademark fees and its proportion as a percentage of net revenue



Source: Company, Nirmal Bang Institutional Equities Research

Parent's support helps SKF India to make inroads with global automotive OEMs in India

SKF India's parent is associated with most global automotive OEMs which have set up plants in India in the past 10 years and includes Japanese and Korean OEMs as well. Riding on the parent's association, SKF India is making inroads with most of them. However, each plant of global automotive OEM is giving business based on a separate tender in which the bearing vendor has to fulfill prequalification criteria independently. Hence, SKF India could successfully fight for a level-playing field with Japanese and Korean bearing manufacturers to win contracts on competitive bidding for the tenders floated by Japanese and Korean automotive OEMs or joint ventures (JVs) in India.

Distribution strength and tie-up with Bosch makes SKF India the largest player in after-market segment

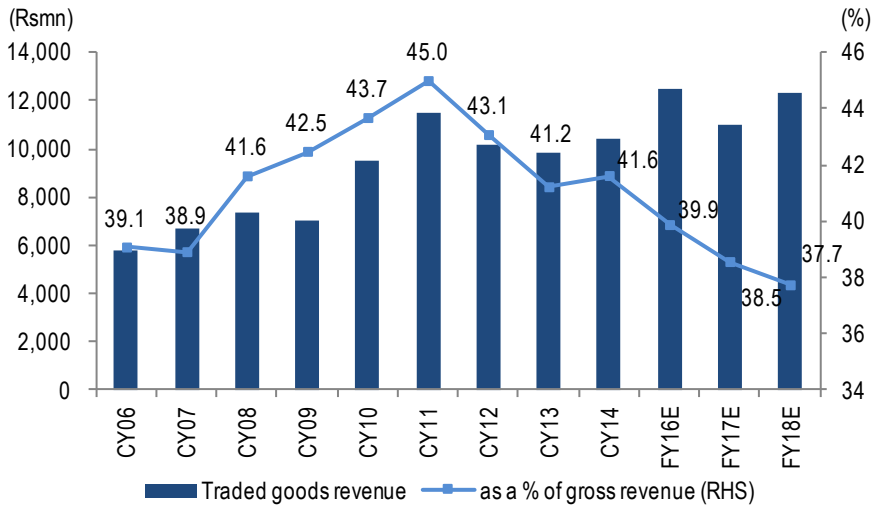
SKF India has understood the importance of after-market sales to counter the cyclicality of revenue from OEMs. The company has been focusing on increasing the market reach by penetrating more regions. It has developed the largest network of dealers and retailers compared to other leading bearing players. In automotive segment, SKF India has a distribution network comprising more than 250 distributors and also more than 20,000 retailers. On industrial front, it has a network comprising 80 distribution outlets. SKF India has increased its presence in industrial bearings as well through various industrial OEMs. This led to the requirement of setting up a large number of SKUs (stock-keeping units) and independent distribution channel. The company has identified industrial clusters for setting up distribution network exclusively for industrial bearings and also establish more than 2,000 touch-points. Moreover, the company has a tie-up with Bosch wherein its bearings are available at 3,000 Bosch service stations across the country.

Traded goods are mostly industrial bearings with lower gross margin, but high asset turnover

Traded bearings are a low margin but high asset turnover business as compared to products manufactured by the company. It mostly includes industrial goods and some local purchases from non-SKF entities like kits for vehicle service in automotive after-market segment. Industrial bearings are characterised by low volume, high value and large varieties or types of products. The SKF group has decided to keep industrial bearing manufacturing out of its listed entity in India. However, these bearings are sold only through the listed entity in India. The share of industrial bearings business in revenue from traded goods is reflection of the state of the industrial development and demand in India. Over CY10-CY14, the industrial segment revenue clocked CAGR of a mere 2.3%, indicating subdued demand in non-automotive industrial space in the country. However, YoY revenue growth rate for industrial segment revenue is improving since the past couple of years and for the first time entered into the positive territory in CY14. The company reported a 6% YoY growth in CY14 as against -11.6% and -.0% in CY12 and CY13 respectively. We believe that there are near-term headwinds on account of sluggish industrial activity. However, this segment is expected to clock YoY growth from FY17 onwards. We have assumed industrial revenue to clock a back-ended CAGR of 5.8% over CY14-FY18E, even though there are near-term headwinds, which hinges on improvement in GDP and IIP growth rates. More importantly, our growth estimates for this segment are also factoring in the entry of SKF India in high-value freight application bearings for railways. As traded goods are mainly sourced from other group entities either in India or overseas, there is an element of forex risk and also low gross margin.

However, it is an asset-light revenue stream which augurs well in keeping asset turnover at a higher level as compared to asset turnover for standalone manufactured goods business.

Exhibit 18: Traded revenue and its proportion as a proportion of gross revenue

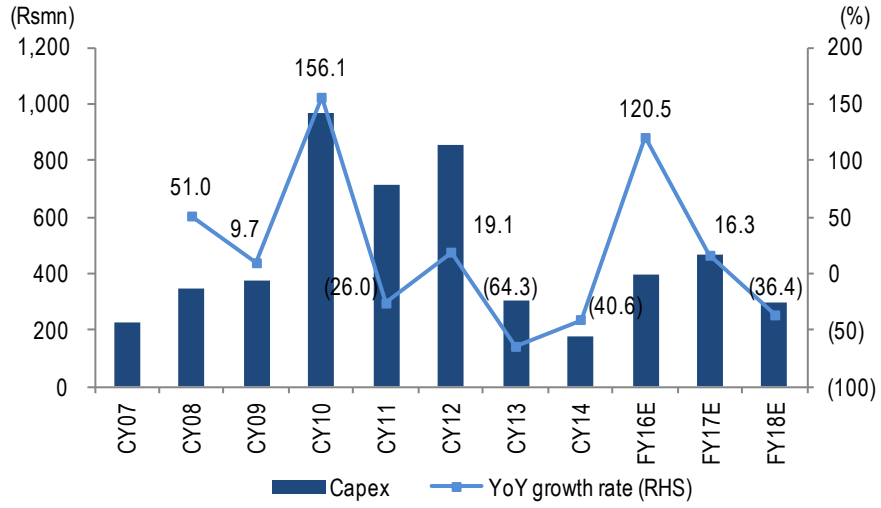


Source: Company, Nirmal Bang Institutional Equities Research

No major capex planned in the near term, but availability of land and building reduces execution period

Bearing manufacturing is a capital-intensive industry and SKF India is required to invest regularly in technology to remain on the growth path. It has done regular capex in the past 10 years with greenfield and brownfield expansions. The company, on an average, incurred capex of Rs520mn per annum over CY07-CY14. The capacity utilisation is different for different plants and also different across products. In FY16, SKF India is not planning any major expansion as current blended capacity has the scope to increase production by 15%. However, it is planning to invest in a new product line for which capex will be ~Rs300mn, mainly on machinery. The company has enough land bank and building space available to accommodate additional capacity. Moreover, the company keeps on doing debottlenecking on a regular basis to extract more from its existing capacity. To set a new product line, the company takes six to nine months. For de-bottlenecking, the period could be even lesser. However, in case of new product, SKF's expansion plan also is a function of its coordination with OEM as homologation of bearings takes a longer time. The average capex over CY14-FY18E is expected to be Rs361mn per annum.

Exhibit 19: Capex



Source: Company, Nirmal Bang Institutional Equities Research

Industrial segment

Fortunes of industrial bearings are closely linked to industrial growth and state of the economy

Industrial bearings are characterised by low volume, large variety, long gestation period to become profitable, long homologation period for commercialisation and requirement of different supply chain and manufacturing process. Hence, investment decisions are based on where it is most logical to put it up. Many factors like availability of skill-set for manufacturing the product, targeted market- either domestic or global etc. have been considered by the parent company (SKF AB) before arriving at a decision to manufacture industrial bearings out of its listed entity. SKF AB finds no business case for manufacturing industrial bearings in the listed entity in India. Hence, almost 85%-88% of industrial bearings sold by SKF India are traded goods. The company has set up a network comprising more than 2,000 touch-points to cater to after-market segment in industrial bearings. Industrial bearing revenues from after-market segment accounts for more than 30% of total net revenues.

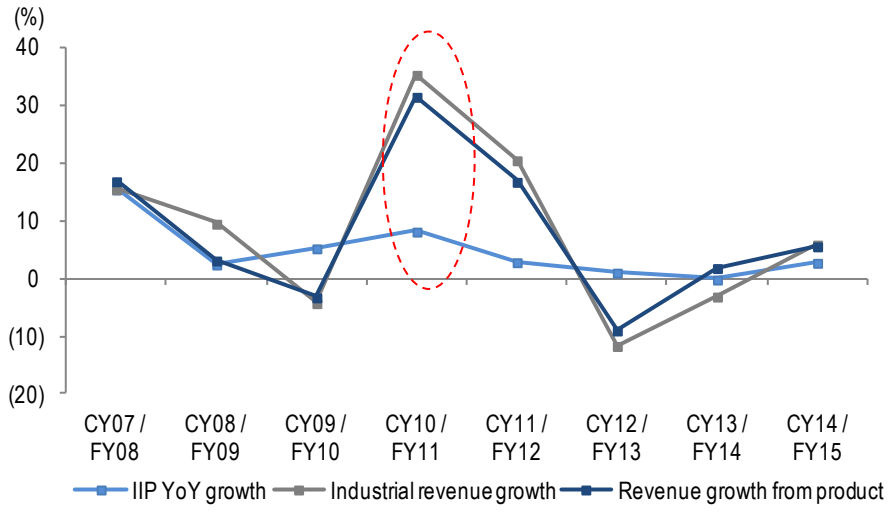
The company has more than a 50% share in wind energy segment. This segment, which is expected to grow 45% YoY in FY16E, contributes ~5% (Rs1.2bn) to revenue currently. SKF India's customers in the segment include ReGen, Wind World, Gamesa and Suzlon. While the government's focus on the segment is clearly strong, SKF India is not sure if the growth trajectory is likely to witness a linear growth trend. The order from ReGen is a part of the parent's order book, but it will be executed by SKF India. This order execution has been delayed and it will now be executed in FY18.

SKF India also serves the railway sector and enjoys 25%-35%% share in passenger coaches applications. Revenue mix in industrial segment is relatively stable with 15% manufactured and 85% traded components. SKF India has increased sourcing of industrial bearings from SKF Technologies (unlisted 100% subsidiary of parent company in Ahmadabad) to around 12%-13%

Industrial segment's sales are highly correlated with IIP (Index of Industrial Production) growth. SKF India sells bearings to more than 40 industries in India. The largest sector is railways. It has been observed that revenue growth accelerates during the years of recovery.

This segment is witnessing headwinds since the past few months on lack of demand in most industrial segments, liquidity crunch and low capacity utilisation. As against the guidance of 10% YoY growth in CY15, this segment grew 6.5% till November in CY15. The company does not see any major pick-up in industrial segment's growth in the near term.

Exhibit 20: IIP growth, SKF Industrial revenue growth and product revenue growth



Source: Company, CSO, Nirmal Bang Institutional Equities Research

Qualifying for railway freight business widens the opportunity net

SKF India supplies bearings for metro rail and also for railway passenger coaches applications. The company commands 25%-35%% share in ~Rs4bn per annum passenger coach bearing segment. SKF India qualified to supply freight application bearings to railways last year.

As per the contract award system of Indian Railways, an approved vendor is eligible to provide up to 5% of the requirement in the first year and then up to 15% in the second year. From the third year onwards, the vendor becomes an equal player competing with other vendors with a cap on maximum allocation up to 30%. SKF India, at present, is at the first stage of 5% and will be eligible as an equal-footing competitor for freight application bearing tender in FY18. The first small order to supply freight application bearings got delayed and will start in January-March 2016 quarter. SKF India is at the stage of final checking, inspection and testing the product before shipment to railways. Currently, Timken India is the largest player in this segment followed by NEI (National Engineering Industry).These bearings will be sourced by SKF India from SKF Technologies, Ahmedabad, at a price arrived through the transfer pricing mechanism. The annual market potential in freight application bearings for the railway segment is ~Rs6bn. Entry in this segment widens the opportunity net for SKF India. Railway bearing refurbishment is also a lucrative revenue segment. This revenue generating activity will be undertaken in SKF India although the bearings have been and will be manufactured by SKF Technologies. At present, the revenue contribution from railways segment is estimated at ~Rs1.3bn per annum.

Indian Railways has changed its pre-qualification process and the bearing manufacturer has to go through a process only once to get approval. The railways insist on AAR (American Association of Railroads) certification, which is very high standard for railway applications. SKF Technologies is in the process of getting it (likely to get it shortly) and then SKF India will be the only AAR-approved facility in this part of the globe for seals. This will make life easier for SKF India for quick localisation of railways, which currently can take anything between three to five years.

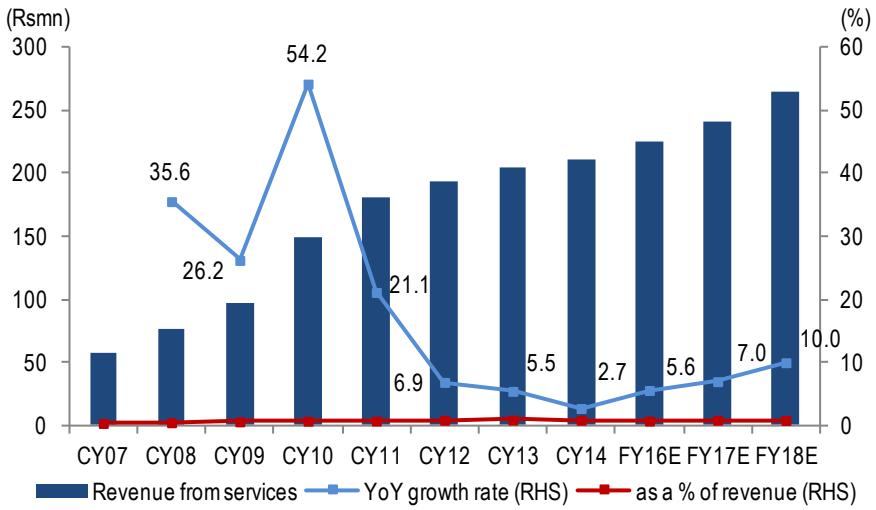
Indian Railways is moving towards higher safety parameters. This requires the railways to use bearings as a medium or a point of data extraction as against the cumbersome system of mounting sensor bearings in the braking system. SKF India has proposed to mount it on wheels. This will help the railways to provide a very high level of safety.

Service business

Service segment allows SKF India to increase engagement with clients and thus boost bearing sales

As per some industry experts, the business potential for other allied services and products is estimated at 10x the size of bearing market globally. SKF India is moving beyond bearings to complement them with other services and products. SKF India is focusing on value creation for customers. However, it believes that service segment does not offer very high revenue potential as compared to bearings. Its significance lies in the fact that these products and services offer an opportunity to remain engaged with clients for a longer period of time. This also allows SKF India to work together with clients, right from idea generation and designing stage. All these initiatives augur well in boosting bearing sales. SKF India does not classify bearing sales arising by virtue of providing service through its service segment. This is the reason why revenue from services appears low. Currently, revenue from service segment is not even 1% of gross revenue. We believe it will remain more or less at the same level. SKF India's parent has done various acquisitions over the past few years which allowed the SKF group globally to go beyond bearings and provide end-to-end solutions. SKF India provides solutions and services encompassing rolling bearings, seals, mechatronics, lubrication systems and other services like technical support, life cycle management, repairs, refurbishment & maintenance service, condition monitoring, asset efficiency optimisation, engineering consultancy and training. It is currently working on more than 30 such contracts across various industries. All these solutions allow reduction in emission and improve efficiency of the plant and machinery under contract.

Exhibit 21: Services revenue, its YoY growth and contribution to revenue



Note: FY16E growth number is annualized

Source: Company, Nirmal Bang Institutional Equities Research

Company background

SKF India is a 53.5% subsidiary of Sweden-based SKF group (SKF AB). The company is well diversified and the largest player in organised domestic bearing market with ~28% overall market share. It was incorporated in 1961. In addition to bearings, the company offers various other products like lubricants, seals etc, and services like mechatronics, remote monitoring system, refurbishment of bearings etc. SKF India has almost equitable distribution of revenue among two broad segments i.e. automotive and industrial. In automotive segment, 66% of the revenue comes from OEMs while after-market contributes 34%. The proportion gets reversed in industrial segment. The company's OEM clients across automotive and industrial segments include Tata Motors, Hero MotoCorp, Honda Motors and Scooters India or HMSI, Maruti Suzuki India, Bajaj Auto, Mahindra & Mahindra, TVS Motor Company, Bosch, Steel Authority of India or SAIL, Coal India, JSW, Essar, Tata Steel; NTPC, Tata Power, Suzlon, REGen, Gamesa, Bharat Heavy Electricals or BHEL, GE, Larsen and Toubro or L&T, Reliance Industries, ONGC, Cairn India; Nestlé India, ITC, Pepsi etc.

As of CY14-end, its revenue and profits stood at 5% and 6% of its parent's consolidated revenue and profits, respectively.

SKF has three manufacturing facilities

1) Pune – The plant, established in 1965, manufactures automotive and industrial bearings and other components.
2) Bengaluru - The plant, set up in 1989, manufactures automotive and industrial bearings and other components.
3) Haridwar – The plant, established in 2009, manufactures bearings for two-wheelers. SKF India sources 85%-88% of industrial bearings from group companies in India and overseas.

Parent company background

The SKF Group (SKF AB), established in 1907, is a leading global supplier of products, solutions and services in rolling bearings, seals, mechatronics, services and lubrication systems. Services include technical support, maintenance services, condition monitoring, asset efficiency optimisation, engineering consultancy and training. It holds a market share of ~20% globally and is present in more than 130 countries with production facilities in 29 countries through 165 plants. Industrial segment's contribution to revenue was 75% in CY14 and the rest was from automotive segment. The company enjoys normalised operating margin of 13%-14% in industrial segment and 5%-6% in automotive segment. At company level, operating margin is in the range of 11.5%-12.0%. RoCE profile is ~15%, on an average, for the past three years. The company derives 40% of its revenue from Europe followed by North America at 25%. Asia-Pacific region accounts for 25% revenue share while the rest 7% is contributed by Latin America. The company is very much focused on R&D (research and development) and spent 2.9% of revenue of CY14 on it, registering a growth of 8% YoY. SKF group's "first filings of patent application" in CY14 stood at 468 as against 468 and 421 in CY13 and CY12, respectively. As of CY14-end, the consolidate revenue of SKF group stood at US$7.81bn and PAT at US$523mn. SKF group is present in India through its various wholly-owned subsidiaries i.e. SKF Technologies (industrial bearings and seals) and Lincoln Helios (lubrication systems). Besides these, SKF also has a Global Technical Centre in Bengaluru, which encompasses technology and product/process development, engineering and testing services. The facility at Mysore is for manufacturing seals. Also, global acquisitions by parent company will help increase the product offerings to customers in India.

Exhibit 22: Various products of SKF AB

Source: SKF AB AR CY14

Industrial seals
HMSA10 (Power transmission seal)
S15 (Fluid power seal)

Automotive seals
SKF Scotseal (Wheel-end seal)
Bonded piston seal (Transmission and driveline seal)

Aerospace seal
Radial lip shaft seal

Precision elastomeric devices
Tail rotor spherical thrust bearing.
Main rotor spherical thrust bearing

Source: SKF AB AR CY2014

Unlisted subsidiary – SKF Technologies

Indigenisation of industrial bearings outside listed entity improves pricing, servicing and lead time

Industrial bearings are characterised by low volume, large variety, long gestation period to become profitable, long homologation period for commercialisation and require different supply chain and manufacturing process. Hence, the investment decision is based on where it is most logical to set up the plant. Many factors like availability of skill-set for manufacturing the product, targeted market- either domestic or global etc. have been considered by SKF group before arriving at a decision to manufacture industrial bearings. SKF group finds no business case for manufacturing industrial bearings at its listed entity in India.

SKF India has extended a loan of Rs2.1bn for setting up the plant of SKF Technologies (100% subsidiary in India) at Ahmedabad. This entity is not a part of SKF India. The repayment of debt extended began in CY15 with Rs200mn. The next installment of Rs500mn is due in January 2016 and will end by FY19. This plant is serving sectors like wind energy, power generation, construction, off highway – mining & material handling, defence and railways. It also caters to steel and cement sectors along with food and beverage sector to some extent.

This plant helps SKF India to expand market share by adding new clients from unaddressed market and improve its costing and pricing. SKF India enjoys exclusive rights to sell the products from this plant in India. The pricing between SKF India and SKF Technologies follows transfer pricing norms and is at arm's length. SKF India currently sources 12%-13% of traded goods from this plant and 12%-15% of industrial bearings are manufactured by it. Hence, out of traded goods, 85%-88% are sourced from group entities in India, Singapore and Germany. Imports from Singapore constitute 55%-60% of total traded goods. There are various advantages for the clients of SKF India. They can save on import duty and logistics costs. The biggest advantage to industrial OEM clients is inventory reduction and the fall in lead time. There was reduction of eight weeks in delivery schedule to clients post localisation of production in industrial segment as against the imported route. SKF India can offer a wide range of products and services. There is no overlap of any products between the two companies. Hence, large-sized industrial bearings and certain sizes of TRB (tapered roller bearings) get manufactured at SKF Technologies and not at SKF India. To cite an example, TRBs up to 200mm are manufactured by SKF India while TRBs of at least 400mm are manufactured by SKF Technologies.

At present, SKF Technologies has low capacity utilisation owing to sharp drop in demand from wind power segment globally over the past five years. SKF Technologies had to revamp its product offering. Currently this entity clocks ~Rs 1.5bn worth of revenues of which 60%-65% comes from supplies to SKF India and the balance being exports to US railways.

Financial analysis

Net revenue expected to post a CAGR of 9.2% over CY14-CY18E

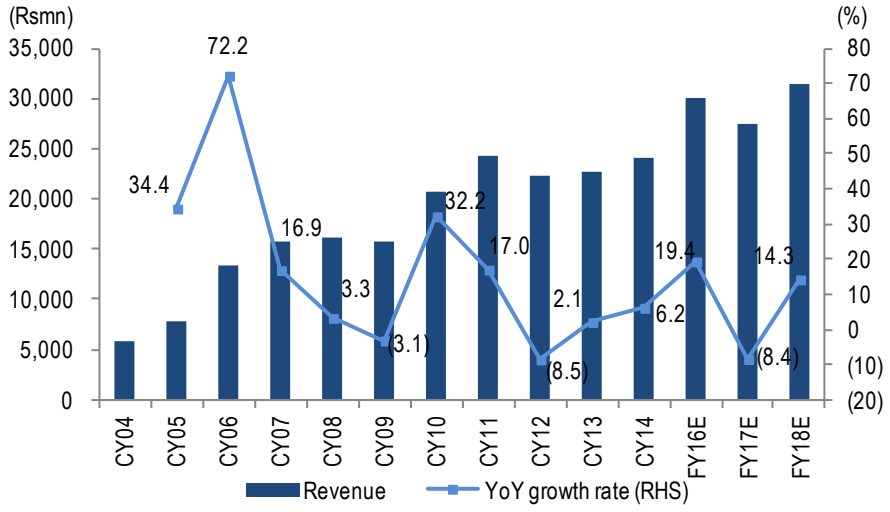
There are three components of revenue - domestic automotive sales, domestic industrial sales and exports which mainly comprise automotive bearings. SKF India clocked a net revenue CAGR of 15% over CY04-CY14. For the same period, automotive volume CAGR was 11%. However, if one divides the revenue CAGR period for the company into two parts, say between CY04-CY09 and CY09-CY14, then the picture which emerges shows a declining trend. For the period CY04-CY09, revenue CAGR was 22% and for CY09-CY14 it was 9%. Interestingly, for those time intervals, total automotive volume CAGR was 11% each. Real GDP and IIP growth for FY05-CY10 averaged 8.1% and ~9.4%, respectively, and for FY10-FY15 it stood at 7.4% and a mere 3.4%, respectively. This clearly indicates that there was a sharp deceleration in the economy over CY09-CY14 which negatively impacted SKF India's revenue trajectory during CY09-CY14 versus CY04-CY09. However, during both the time spans, SKF India's revenue could exceed automotive volume CAGR, average GDP growth and average IIP growth.

This was possible primarily because of the flexible business model. The company started sourcing industrial bearings from SKF Technologies, and focus on after-market segment by strengthening the distribution network. We believe that there are near-term headwinds for SKF India, given the low automotive segment volume growth rate, subdued IIP growth and moderate GDP growth. These factors affected SKF India's revenue, which remained flat for the nine-month period ended September 2015.

However, with policy initiatives in the past few quarters like: A) Coal mine auction, B) Efforts to revive stalled infrastructure projects across road, power, port sectors etc., C) Reinstatement of accelerated depreciation in wind energy segment, D) Implementation of advance emission norms and ABS in automotive sector, E) Modernisation and expansion of railways, DFC project and setting up of metro rail network in more than 20 cities across India, F) Falling interest rates and G) Recently announced average pay hike of 23% for government employees recommended by Seventh Pay Commission are likely to augur well for SKF India's revenue growth in coming quarters.

Moreover, SKF India won a few new contracts to supply GEN3HUB (third generation) bearings to PV OEMs which will start generating revenue from the last quarter of FY17E. The new product range will be priced 2-2.5x above existing GEN1HUB bearings and is likely to have better margins. The company is also eligible to bid for freight application bearings for railways. These new opportunities are likely to improve revenue growth in FY17. However, higher growth in PV, CV and railway segments may be partially offset by weak two-wheeler demand. Revenue growth is likely to accelerate from FY18 as the full effect of these two opportunities will get captured from FY18. Rising share of localised industrial bearings sourced from SKF Technologies is also expected to reduce costs and lead time for clients, which may help SKF India to improve its market share in industrial bearings, especially in railway sector. We expect net revenue to post a CAGR of 9.2% over CY14-FY18E.

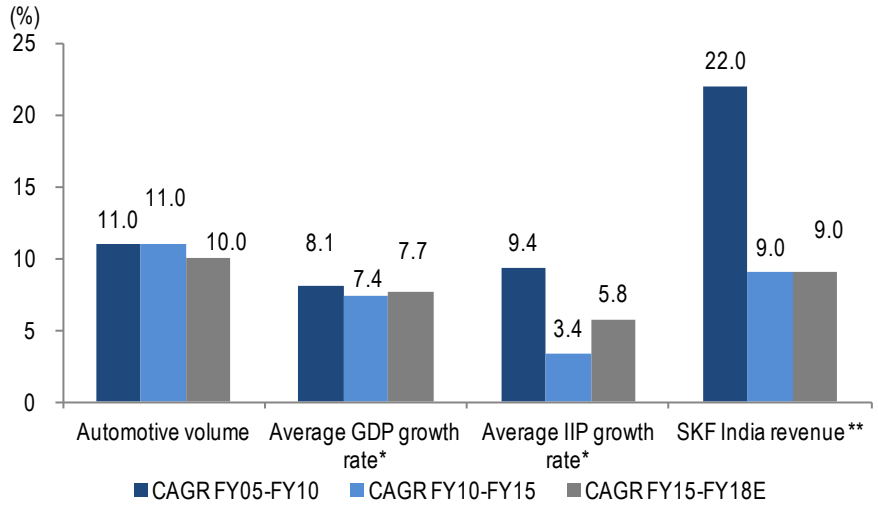
Exhibit 23: Net revenue and YoY growth



Note: FY16E growth number is annualised

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 24: Automotive volume CAGR, Average GDP growth, Average IIP growth, SKF revenue growth



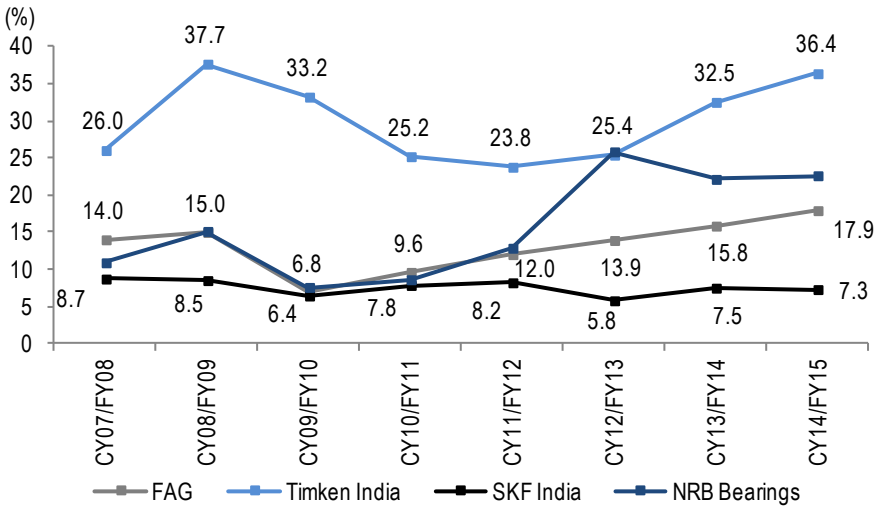
**= Average growth rate; ** = SKF India revenue was for the period CY04-CY09/CY09-CY14 and CY14-FY18E*

Source: Company, SIAM, CSO, Nirmal Bang Institutional Equities Research

Exports are smallest revenue source for SKF India and weakest area compared to peers

The contribution of exports to revenue stream of SKF India historically has been in the range of 7%-9% and the lowest when compared to Timken India and FAG where it was in the range of 26-%-36% and 7%-18%, respectively. The philosophy of SKF group is that the unit or plant which has necessary technical competence to manufacture a particular product at best costs should do it. SKF group's manufacturing philosophy is not to use China and India as low-cost manufacturing bases but go ahead lock, stock and barrel to produce bearings for exports. SKF group believes that each region should produce what is required locally. There is the concept of best-cost country as well. No banner statement like low-cost manufacturing destination works for SKF group. However, there are few types of bearings that SKF India only can manufacture at the best price within SKF group and exports. There is a particular range of TRBs for PVs which SKF India only can manufactures at the best price globally within SKF group and exports to Europe. Hence, as long as there is a demand for those types of bearings overseas, SKF India will continue to be able to export.

Exhibit 25: Exports as a percentage of revenue



Source: Company, Nirmal Bang Institutional Equities Research

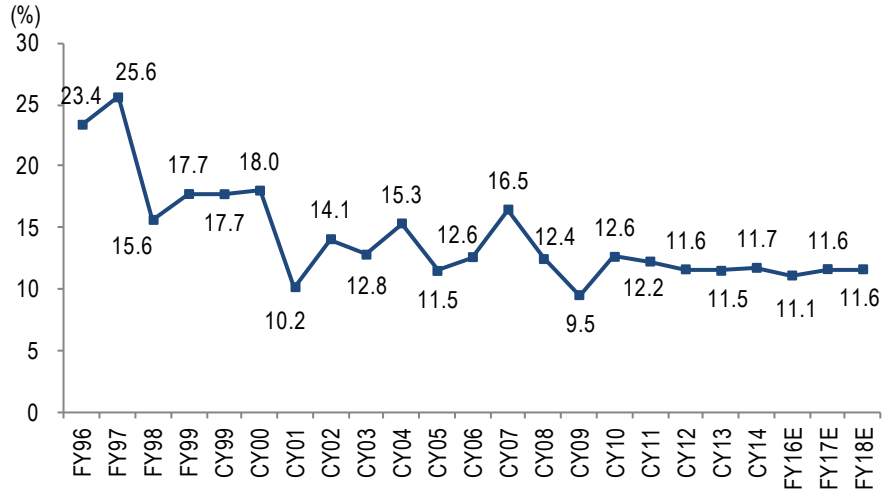
EBITDA margin likely to be maintained despite the focus on increasing market share

Over CY04-CY14, EBITDA margin was mostly in the range of 11.5%-12.0% except CY04 and CY07 when it was 15.3% and 16.2%, respectively. The same touched trough level in CY09, for the first time, declining to a single-digit level of 9.3%. However, there has been a declining trend in EBITDA margin over FY96-CY14. Over FY96-CY09, EBITDA margin averaged 16% against 12% averaged over CY06-CY14. Primary reasons for the decline in margins were – A) Rising share of low-margin traded goods (gross margin of traded goods is one-fourth of manufactured goods) in revenue (up by more than 400bps), B) Lower capacity utilisation or

taking production cuts some times to cope with lower demand in the past five years, C) Pressure on pricing owing to rising competition, D) Five-fold increase in royalty payment over CY06-CY14 (and in relation to revenue it increased from 0.6x in CY06 to 1.6x in CY14) and introduction of trademark fee from CY12 (which was 1.1% over CY13-CY14), and E) Five-fold increase in logistics costs over CY06-CY14 (in relation to revenue they increased from 0.5x in CY06 to 1.2x in CY14).

SKF India will continue to look for market share gains, which may be at the cost of margins. Thus, despite possible further gains likely from lower commodity prices, overall margin trajectory may remain stable. We expect EBITDA margin to remain flat at 11.6% over CY14-FY18, although it is expected to touch the level of 11.1% in FY16. Out of this, major expansion will come from FY17 only. This will be on account of: A) Likely improvement in market share in PV OEM segment, given that a few GEN3HUB bearing contract wins will be remunerative from 4QFY17.The new product range will be priced 2.0x-2.5x above existing GEN1HUB bearings and is likely to have better margins, B) Implementation of ABS in commercial vehicles from CY15 and in two-wheelers above 125cc engine capacity from April 2017. The realisation of sensor bearing is 3x that of non-sensor bearing, C)Entry into high-margin freight application bearings for railways, D) Advantage of operating leverage following uptick in demand in all user industries which will lead to higher capacity utilisation, E) Likely pick-up in demand from sectors like off-highway vehicles, mining, MHCVs etc. which use large-sized high-margin bearings, F) Likely continuation of soft commodity prices, and G) Rising share of domestically produced bearings in revenue as the company moves towards localisation of imports.

Exhibit 26: EBITDA margin

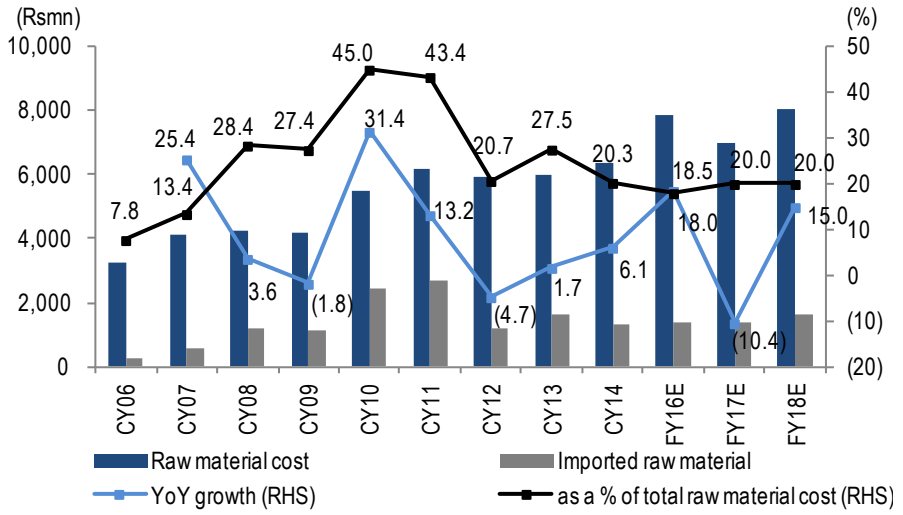


Source: Company, Nirmal Bang Institutional Equities Research

No automatic escalation in OEM contracts for uptick in raw material prices

SKF India is not very much in the routine commodity cycle. The requirement is of special steel. There are some other exotic metals like nickel and molybdenum - which go into making bearing category steel - and whose prices are not declining in the similar proportion as that of steel. At present, there is general slowdown in demand and prices across commodities. The bearing category of steel is also stable, but it has not gone down the way other metal prices corrected, owing to the reason stated above. Moreover, Indian government has imposed anti-dumping and safeguard duty of 20% each on bearing category steel imports in India in August 2014. The safeguard duty declined to 10% in June 2015.The company is not likely to suffer on account of increase in steel prices. As a result, SKF India ended up paying higher duty in India compared to manufacturers in China. However, duty on imported finished product (bearing) is in the range of 5.0% to 7.5% plus CVD plus Special CVD. The company successfully reduced the percentage of imported raw material from 44% of total raw material consumed in CY10 to 20% in CY14. This insulates SKF India from any rise in raw material prices, given the abrupt forex fluctuations. However, there is no pass-through of any raw material costs in OEM business. SKF India has to negotiate them every time.

Exhibit 27: Raw material costs, YoY growth and imported raw material costs as a percentage of total raw material costs



Note: Raw material growth for FY16E is annualised

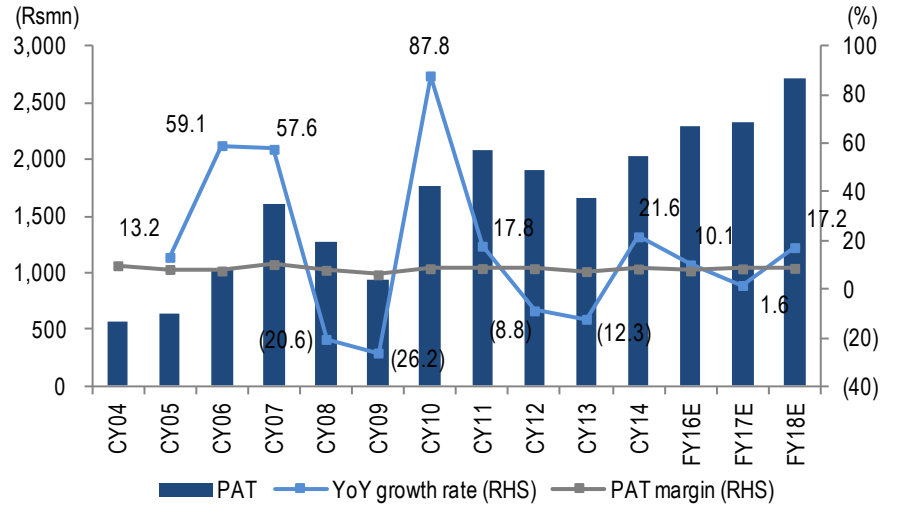
Source: Company, Nirmal Bang Institutional Equities Research

We expect PAT to clock a CAGR of 10% over CY14-FY18E

SKF India's PAT registered a CAGR of 14% over CY04-CY14. However, interestingly over CY04-CY09, PAT posted a CAGR of 11% against revenue CAGR of 22%. Similarly, over CY09-CY14, PAT clocked a CAGR of 17% but revenue registered a CAGR of 9%. PAT growth in the past five years was higher than revenue growth on account of A) Higher other income which registered a CAGR of 24% over CY09-CY14 because of rising cash balance, which increased 84%, B) EBITDA margin expansion from 9.5% in CY09 to 11.7% in CY14, which translated into EBITDA CAGR of 14% over CY09-CY14, and C) Reduction in blended tax rate by an average 60bps over CY09-CY14.

We expect revenue to post a CAGR of 9.2% given the overall improvement in all user sectors. SKF India is expected to continue looking for market share gains, which may be at the cost of margins. Thus, despite further gains likely from lower commodity prices, overall margin trajectory may remain stable Consequently, EBITDA margin is likely to move in a range over CY14-FY18E and stay around 11.6%. With no major capex planned, other income is be likely to be healthy on account of better cash generation. We expect other income to post a CAGR of 12% over CY14-FY18E. Hence, we expect PAT to clock a CAGR of 10% over CY14-FY18E, in line with revenue growth and stable margins.

Exhibit 28: PAT, YoY growth and margin



Note: PAT growth for FY16E is annualised

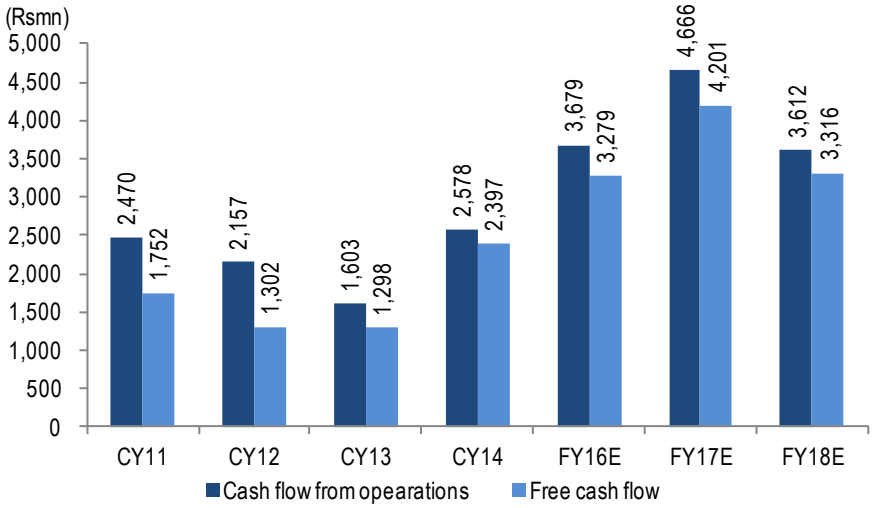
Source: Company, Nirmal Bang Institutional Equities Research

SKF India expected to maintain healthy cash flow - never witnessed negative operating cash flow

SKF India has always maintained positive cash flow from its operations over FY96-CY14. Free cash flow was negative only thrice over the same period. Since CY05, the company has turned debt-free. Average cash flow from operations and free cash flow per annum over CY11-CY14 stood at ~Rs2bn and Rs1.7bn, respectively. Capex per annum over CY11-CY14 was Rs559mn, which was lower than average cash flow from operations during the same period. Hence, SKF India managed to fund its capex without resorting to debt. The cash conversion cycle over CY11-CY14 was of 40 days and well under control.

We expect the company to keep generating positive cash flow from operations and free cash flow over CY14-FY18E, mainly on account of steady growth in EBIT with a CY14-FY18E CAGR of 10%, well-controlled working capital cycle, lower capex requirement (our assumption of average capex of Rs336mn per annum over CY14-FY18E), and a steady growth in other income at a CAGR of 10% over CY14-FY18E.

Exhibit 29: Cash flow and free cash flow



Source: Company, Nirmal Bang Institutional Equities Research

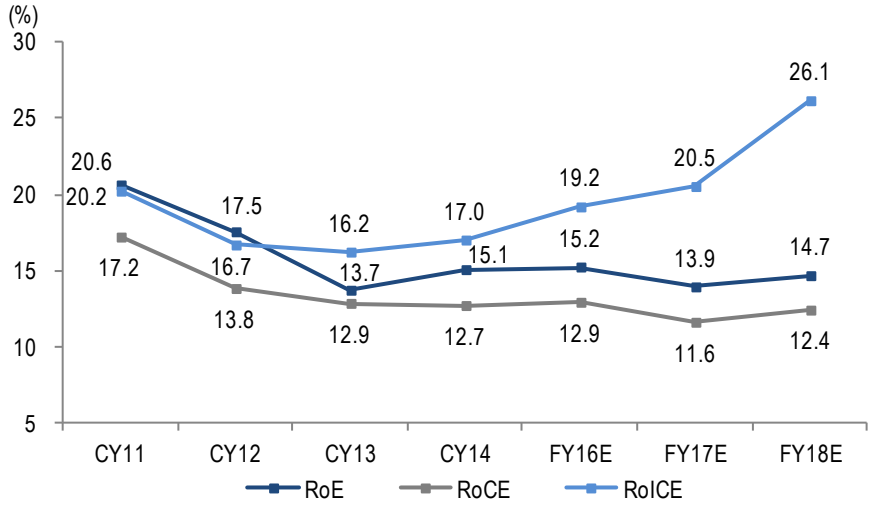
Return on equity likely to go up from FY18E

Over CY04-CY14, return on equity averaged 21% with the peak at 33% in CY07 and trough of 13% in CY09. However, in the past five years over CYCY11-CY14, RoE averaged 16.7%, indicating a declining trajectory. The analysis suggests it was mainly on account of stagnated net profit margin and a steady decline in total asset turnover and leverage. Fixed asset turnover also declined steadily, mainly on account of muted revenue CAGR of 4% over CY10-CY14. Core RoE also went down, mainly on account of the decline in core PAT margin.

We expect RoE to average 14.7% over CY14-FY18E against an average 16.7% over CY11-CY14. Lower revenue growth rate, which is likely to result in a decline in total asset turnover coupled with the expected fall in leverage, is likely to result in lower average RoE.

EBIT margin compression of 100bps over CY11-CY14 also pulled down RoCE by more than 400bps over the same period. Low-yielding cash and cash equivalents as a percentage of total balance sheet also increased from 16.5% to 28.0% over CY10-CY14, which also negatively affected RoCE. RoIC has also witnessed a decline of over 300bps to 17% over CY11- CY14.

Exhibit 30: RoE, RoCE, RoICE



Source: Company, Nirmal Bang Institutional Equities Research

Outlook and valuation

SKF India is the largest and most diversified bearing player in domestic market as it operates in more than 40 industries and works with most of the leading automotive and industrial OEMs. Despite the cyclical nature of business, the company has always been profitable at operating as well as at net level over CY99-CY14. The company generated positive cash flow from operations every year over the same period. However, free cash flow was in negative territory only thrice over CY96-CY14, indicating the ability of the company to fund its capex out of cash flows from operations of the same year. Moreover, SKF India became debt-free from CY05. Hence, the company has a strong cash generation profile and operates in sectors which are technology-driven and capital intensive. Moreover, strong relationships with OEMs which is a major and difficult client segment to get associated with offers high entry barriers for competitors. The company enjoys strong technology support from its parent. Moreover, SKF India derives 40% of its revenue from after-market segment, the largest among peers. This is on account of the largest network among peers comprising 250 distributors and more than 20,000 retailers. This has augured well for SKF India to reduce the impact of vagaries of OEM business and de-risk revenue flow.

At the CMP, SKF India stock currently trades at 27.9x FY17E EPS of Rs44 and 23.8x FY18E EPS of Rs51.6. We expect revenue and PAT CAGR of 9% and 10%, respectively, over CY14-FY18E against 4% and 3%, respectively, over CY10-CY14. Stability in margins and a marginal decline in return ratios is expected despite higher operating leverage led by demand revival, continuation of soft commodity prices, increased localisation in industrial bearings, uptick in the share of high-margin, high-technology large-sized bearings like sensor bearings, GEN3HUB (third generation) bearings and freight application bearings for railways, well-controlled working capital cycle and moderate capex. SKF India will continue to generate strong free cash flow and remain debt-free. However, we expect exports to remain in line with the trend and not increase their share in revenue.

We have valued SKF India at 25x FY18E EPS of Rs51.6, at a premium to its past three-year average P/E of 23.6x, as we expect EPS CAGR of 10% over CY14-FY18E against EPS CAGR of 3% over CY10-CY14. We believe the above mentioned attributes will continue to support its premium valuation. We have assigned Accumulate rating to the stock with a target price of Rs1,290 based on 25x FY18E EPS of Rs51.6.

Key risks

Decline in Indian rupee-denominated imports and unfavourable forex movement may impact margins adversely

SKF India is a net importer of bearings. Imports surged at a CAGR of 32% and exports at 15% over CY06-CY14. Exports contributed to revenue in the range of 7%-9%, but imports ranged between 32%-37% of net total revenue over CY11-CY14. Imported raw materials, components and traded goods accounted for an average ~54% of total costs of raw material, components and traded goods. This poses the biggest risk as SKF India does not hedge or go for forex derivatives to minimise sharp fluctuations. Moreover, raw material cost increase on account of forex fluctuations is not pass-through. SKF India has to negotiate with its clients. However, 60% of its imports are INR (Indian rupee) denominated and also get sold in INR. Out of the balance 40% imports which are mainly indexed to Euro, a major portion has natural hedge in terms of exports. Hence, a very small portion of imports require hedging or forex management. As per our belief, for CY12/CY13/CY14 the unhedged forex positions as a percentage of total imports stood at 20%/12%/12%, respectively, amounting to Rs1.5bn/Rs900mn/Rs970mn, respectively.

Surge in royalty payment and trademark fee may adversely impact operating margin

SKF India pays royalty and newly introduced (from CY12) trademark fees on indigenously manufactured products and technology service provided to clients of the listed entity. The combined rate of royalty and trademark fee increased from 0.66% of net product and service revenue in CY06 to 2.76% in CY14. This adversely impacted operating margin. Hence, any further increase in royalty payment, trademark fee or other associated charges may result in margin compression.

Delay in introducing new technology and products may result in loss of market share

SKF India has lost market share in passenger vehicle OEM segment in the past on account of non-availability of GEN3HUB (third generation) bearings in its portfolio. The company was quick enough to realise the shortcoming and introduced the product. If the company remains behind the curve on this front, it may result in market share loss which is difficult to regain, as admitted by the management.

Slower-than-expected pace of recovery or delay in key user segments

Automotive segment including exports contribute 50%-52% to the company's revenue. Moreover, in domestic automotive market, SKF India holds a 30% share in two-wheeler segment and 13%-15% share in PV segment. Both these segments are either showing a negative trend or a marginal uptrend on monthly basis. Other industrial segments are not yet showing firm signs of recovery, as indicated by lower core sector growth and flat capacity utilisation rate for the past few quarters. Any delay in recovery in the user segment can impact our estimates adversely.

Rising competition and imports in automotive segment may reduce SKF India's market share

The current overall market share of ~28% in domestic bearings market may come under threat if SKF India loses new OEM contracts in automotive space owing to rising competition from Japanese players and more number of automotive OEM preferring importing bearings from China for OE fitment.

Expansion of spurious bearing market and rise in raw material costs

There are more than 300 manufacturers of bearings - mostly ball bearing - in India in addition to imports of ball bearings from China. These products mainly cater to after-market segment. SKF India draws 70% of its revenue from ball bearings and 40% from after-market segment. Moreover, SKF India holds a 45% market share in ball bearings category in domestic organised market. Incidentally, ball bearing is the largest category of bearings which is the biggest victim of spurious products. SKF India, being a dominant player in this category of bearings and drawing most of the revenue from this product is highly susceptible to increase in the proportion of spurious products. Raw material costs, (including traded goods) as a percentage of total net revenue, was in the range of 63%-65% in the past three years. With such a high proportion in cost structure, any significant spike in raw material prices could lead to a big dent in margins.

Financials

Exhibit 31: Income statement

Y/E March (Rsmn)	CY13	CY14	FY16E	FY17E	FY18E
Net revenue from product sale	22,260	23,516	29,384	26,713	30,591
Sale of services	205	210	225	241	265
Other operating income	285	430	396	536	555
Revenue from Operations	**22,750**	**24,156**	**30,005**	**27,489**	**31,411**
Other income	634	769	815	898	1,072
Total Revenue	**23,383**	**24,925**	**30,820**	**28,388**	**32,482**
Cost of material consumed	5,995	6,359	7,827	7,011	8,059
Purchase of stock-in-trade	8,467	8,958	11,399	10,188	11,617
Changes in the invetories	(64)	(318)	(318)	(34)	(29)
Employee benefits expenses	1,853	2,155	2,597	2,441	2,710
Other expenses	3,888	4,169	5,169	4,689	5,409
Total expenses	**20,138**	**21,324**	**26,675**	**24,295**	**27,766**
EBITDA	**2,612**	**2,832**	**3,330**	**3,194**	**3,645**
Depreciation	494	540	685	576	596
EBIT	**2,118**	**2,292**	**2,645**	**2,618**	**3,049**
Financial charges and interest	-	-	-	-	-
PBT (Before exceptional items)	**2,751**	**3,062**	**3,460**	**3,516**	**4,121**
Exceptional item	221	-	-	-	-
PBT	**2,530**	**3,062**	**3,460**	**3,516**	**4,121**
Total tax	863	1,034	1,176	1,195	1,401
Profit After Tax	**1,667**	**2,028**	**2,284**	**2,321**	**2,720**

Note: *=FY16E numbers are for 15 months;

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 33: Balance sheet

Y/E March (Rsmn)	CY13	CY14	FY16E	FY17E	FY18E
Share capital	527	527	527	527	527
Reserves and surplus	12,228	13,635	15,283	16,968	19,052
Networth	**12,755**	**14,162**	**15,810**	**17,495**	**19,580**
Non Current Liabilities	**260**	**271**	**271**	**271**	**271**
Deferred tax liabilities (Net)	40	1	1	1	1
Other long term liabilities	-	-	-	-	-
Long-term provisions	220	270	270	270	270
Current Liabilities	**3,938**	**4,679**	**5,735**	**5,488**	**6,019**
Trade payables	2,511	3,367	3,951	3,723	4,259
Other current liabilities	744	858	832	812	811
Short term provisions	683	454	952	953	949
Total	**16,953**	**19,112**	**21,816**	**23,254**	**25,869**
Total gross block	10,104	10,348	10,782	11,232	11,547
Accumulated depreciation	6,340	6,682	7,367	7,943	8,539
Net Fixed assets	**3,764**	**3,666**	**3,415**	**3,289**	**3,008**
Capital work in progress	247	184	150	165	146
Long term loans and advances	2,535	2,320	1,620	920	220
Current Assets	**10,407**	**12,942**	**16,631**	**18,880**	**22,496**
Inventories	2,552	2,930	3,788	3,162	3,622
Trade receivables	3,298	3,730	4,686	3,992	4,475
Cash and carry equivalents	3,758	5,348	7,992	11,557	14,238
Short term loans and advances	714	806	55	46	62
Other current assets	86	129	110	124	99
Total	**16,953**	**19,112**	**21,816**	**23,254**	**25,869**

Note: *=FY16E numbers are for 15 months

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 32: Cash flow

Y/E March (Rsmn)	CY13	CY14	FY16E	FY17E	FY18E
EBIT	2,118	2,292	2,645	2,618	3,049
Exceptional item (-)	(221)	-	-	-	-
(Inc.)/Dec in working capital	(447)	(204)	11	1,069	(404)
Other income	634	769	815	898	1,072
Depreciation	494	540	685	576	596
Tax paid (-)	(863)	(1,034)	(1,176)	(1,195)	(1,401)
Inc/(Dec) Other long term liability	-	-	-	-	-
(Inc)/Dec Long term assets (-)	(112)	215	700	700	700
Net cash flow from operations	**1,603**	**2,578**	**3,679**	**4,666**	**3,612**
Capital expenditure (-)	(305)	(181)	(400)	(465)	(296)
Net cash flow after capex	**1,298**	**2,397**	**3,279**	**4,201**	**3,316**
Interest paid (-)	-	-	-	-	-
Dividends paid (-)	(463)	(1,388)	(635)	(635)	(635)
Cash flow from financial activities	**(463)**	**(1,388)**	**(635)**	**(635)**	**(635)**
Others	(147)	581	-	-	-
Opening cash	3,070	3,758	5,347	7,992	11,557
Closing cash	**3,758**	**5,347**	**7,992**	**11,557**	**14,238**
Change in cash	688	1,590	2,644	3,566	2,681

Note: *=FY16E numbers are for 15 months;

Source: Company, Nirmal Bang Institutional Equities Research

Exhibit 34: Key ratios

Ratio analysis	CY13	CY14	FY16E*	FY17E	FY18E
Per share (Rs)					
EPS	31.6	38.5	34.6	44.0	51.6
CEPS	41.0	48.7	45.0	54.9	62.9
BVPS	241.9	268.6	299.8	331.8	371.3
DPS	7.5	10.0	10.0	10.0	10.0
Dividend payout (%)	23.7	26.0	28.9	22.7	19.4
Valuation (x)					
P/E	38.9	32.0	35.5	27.9	23.8
P/BV	5.1	4.6	4.1	3.7	3.3
EV/EBITDA	23.4	21.0	21.3	16.7	13.9
Mkt-cap/ sales	2.8	2.7	2.7	2.4	2.1
EV/sales	2.7	2.5	2.4	1.9	1.6
Return ratios (%)					
RoANW	13.7	15.1	15.2	13.9	14.7
RoACE	12.9	12.7	12.9	11.6	12.4
RoAIC	16.2	17.0	19.2	20.5	26.1
Margin (%)					
EBITDA margin	11.5	11.7	11.1	11.6	11.6
EBIT margin	9.3	9.5	8.8	9.5	9.7
Tax/PBT	34.1	33.8	34.0	34.0	34.0
Net profit margin	7.3	8.4	7.6	8.4	8.7
Expense ratios (% of revenue)					
Cost of raw materials consumed	26.1	25.0	25.0	25.4	25.6
Traded goods	37.2	37.1	38.0	37.1	37.0
Employee benefit expenses	8.1	8.9	8.7	8.9	8.6
Total expenses	88.5	88.3	88.9	88.4	88.4
Turnover and working capital ratios					
Debtor period (days)	53	56	57	53	52
Inventory period (days)	56	61	63	58	58
Creditor period (days)	63	80	75	79	79
Cash conversion cycle (days)	45	37	45	32	31
Fixed assets turnover (x)	2.3	2.4	2.8	2.5	2.8
Non-cash net working capital (Rsmn)	2,711	2,915	2,904	1,835	2,239

Note: FY16E ratios annualised wherever applicable;

Source: Company, Nirmal Bang Institutional Equities Research

Disclaimer

Stock Ratings Absolute Returns

BUY > 15%

ACCUMULATE -5% to15%

SELL < -5%

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