



## “Bosch Limited – Investor Meet”

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**Annamalai Jayaraj:** Welcome everybody for the Bosch investor meet. Today we have Bosch's senior management with us. Dr. Steffen Berns - Managing Director, Mr. Soumitra Bhattacharya - Joint Managing Director, Mr. S. Karthik - Vice President-Finance.

So we will start with the presentation by Dr. Steffen Berns and it will be followed by a question-and-answer session. The investors who could not physically travel have joined through the call. So around 1015 we will take some questions from them in between. I request everybody to switch off their cellphones.

**Steffen Berns:** So good morning again and first of all thanks to B&K Securities for hosting this event and also thanks to all of you for attending today morning on this session. We want to give you an overview today on our perspective of the automotive market then a few current technology trends. One point is the carve out of the Starter Motors and Generators business which was decided in the last Board Meeting of our company on 5 February and which we will put to vote to the shareholders within March and then we are going to have a large part of discussions and Q&A. So I am not going to take the major part in my presentation but rather reserve enough time for questions and answers for you here in the room and also on the telephone.

As Mr. Jayaraj have already said two of my colleagues are here with me today, our Joint Managing Director incharge of commercial Mr. Bhattacharya and the Company Secretary Mr. Karthik who will be also available and supporting me in the Q&A part.

A short overview on the automotive market. To start with, as you may know from our concall we are looking at the automotive production figures as a reference where we add everything except the two wheelers, because the two wheelers for us is relatively low turnover and relatively large volumes so they would kind of distort this chart. But here this is adding all the different volumes, so from three wheelers, tractors, passenger cars, utility vehicles and commercial vehicles all added together and these are the production figures per quarter and what is quite interesting actually is that since the first quarter of financial year 2012-13 we have been in a very small corridor of 1.3 million to 1.4 million, 1.5 million so plus minus 6% range now for nearly four years.

There has been only one exception which was the second quarter that the July to September quarter 2015 which was on 1.5 million and the rest has been more or less in this corridor of 1.3 million to 1.5 million vehicles and also the third quarter that is the October to December quarter of last year has been again more on the lower end of this range. We always have to consider that there is production volume and that there are sales volumes, so the automotive sales slightly deviate but there has overall been no large buffer stock increase. So these production numbers that is what our customers built and sourced from us and automotive is still 87% of our business that is very relevant for us. And the interesting part here is that independent of weather conditions and election conditions and post-election conditions actually the market has been relatively low now for a relatively long time which you also see on the gross figures.



We compare this as the basis with the Bosch figures and here you can see the blue line are the Bosch Limited growth rate which you also know from our quarterly results and with one exception in the fourth quarter of 2014-2015 we have consistently outgrown the automotive market and of course we are trying to continue to do so which is mainly due to success in the diesel business and the growth in the gasoline systems business. In the earlier part we also had some good growth rates in the Starter Motors and Generators but this has come down in the last year. And on top of this, we have also grown the non-mobility solutions business, but this has not had a major impact because we have been in the range of 12%, 13%, 14% of the Company. So it is relatively small overall and also the share of our business overall has not changed significantly in this timeframe.

So that our view and two messages here. One that the overall automotive market has not grown fast and two, that Bosch has done relatively well compared to the automotive market. Just one additional thought which I forgot to explicitly mention. You of course know that there has been very positive developments in between, so if you look at passenger cars a growth of 5% to 6%. You may ask, where is it? Recently we have had very good growth figures in heavy commercial vehicles, but within these different segments the positives and the negatives always leveled out and compensated and lead to these relatively low growth figures in the red line shown here.

Some of the current topics. We recently in the first week of February at the India Motor Show in Delhi and Bosch was present outside the Motor Show in Delhi because the Motor Show was exclusive for automotive manufacturers and there was a supplier show in Pragati Maidan which we felt is too far away, so we had an exclusive event opposite the Motor Show and this was by invitation only exhibition in Greater Noida and we had excellent footfall drawing many visitors of our customers spent a good amount of time in our show.

You can see the picture here with the engines in the front of on gasoline on these engines which of course is the core of our business. And what Bosch Limited exhibited there are three main areas. One is gasoline fuel injection systems. Bosch Ford fuel injection that also for the future quite importantly the gasoline direct injection with enhanced fun-to-drive and significant CO2 reductions that we talked about gasoline direct injection 15% and improved fuel economy with a turbocharged engine compared to a naturally aspirated pot fuel injected engine. And we have discussed this also in the concall that there is a trend although much slower than in other developed countries this is going to come in India as well. A very central part on diesel common rail systems or different generations for the different vehicle classes we are serving. And here of course the big topic is and discussion started in a completely different direction since December of last year is BS-VI norms. And I would like to make a few general statements on BS-VI because that is very relevant for the industry and the country.

Bosch's slogan is Invented for Life and therefore we are very strong in offering technologies which enhance the life of the people, which means clean, which means fuel economy and also which means safe. So the safety part is now part of Bosch Limited generally but we are focusing



more on the clean and economical part and therefore we support worldwide the development and the production of clean technologies and we accept the currently discussed levels as BS-VI introduction by 1 April 2020. We support this and we are in discussion with a lot of our customers to support this and to make it happen. We are convinced that the diesel engine can be a very clean engine and we are convinced that only with the diesel engine we can meet the carbon dioxide targets. And Mr. Modi a few months ago in Paris have signed that India is committed and supporting also to reduce CO<sub>2</sub> output relative to the GDP and this can only work with diesel engines and I would even say with an increased diesel engines.

So we have to do two steps. One is make it clean or cleaner and two is to spread it more widely because diesel has an inherent advantage compared to gasoline on reducing CO<sub>2</sub> and CO<sub>2</sub> is the synonym for fuel economy and also cost of ownership for taxi drivers etc. So if you want to run vehicles with high mileage economically, you do need diesel engines and we are convinced that also the public opinion can be changed again once this discussion gets out of this emotional corner where it is in today.

There are studies about the contribution of diesel to emission. IIT Kanpur I think has been widely quoted that we are not hiding behind these studies. The studies tell that vehicular emissions contribute about 20% to CO<sub>2</sub> and actually the tail pipe emissions so what coming out of the exhaust pipe only 10% but still some improvement is needed and we are supporting this. And that is a very clear statement.

On the other hand, of course it is going to be challenging. No other country has done two emission levels within four years. India has specific conditions. The driving cycles in India are different if you know Bangalore it is more standing than driving which is a challenge because you need a certain temperature and you need a certain speed to regenerate your exhaust gas treatment systems. And therefore a certain specific measures are required to make these vehicles achieve the BS-VI levels hence these vehicles to work. So therefore there is specific effort and you cannot simply transfer the engines of the vehicles from Europe to India and hope that it is going to remain BS-VI or it is going to meet BS-VI and to work.

The other major challenge is the fuel availability. You need low Sulphur fuel to make the systems work because with high Sulphur the exhaust gas systems gets poisoned and then again you will not meet the BS-VI fuel levels or the BS-VI emission levels. Currently it is being announced and promised that the fuel is going to be available country wide on 1 April 2020 and we are cautioning and saying (a) it is logistically such a changeover has to be handled so it is not sufficient that you say from today everything now is going to be BS-VI. So you have to have a country wide fuel available several months earlier.

The second is that validation is required and the validation typically we say we need two cycles of summer and winter of one year each and we need fuel from Indian refineries. So there should be a sufficient quantity of fuel available two years prior to introduction so that the validation can

be done in a reasonable way so that we make sure that afterwards the engines and the vehicles actually are working. Just one hint, lubrication is the key matter and Sulphur is bad for the emissions but is a very good lubricant. So if you take the Sulphur out you have to put some additives in to make sure that the lubrication quality is sufficient and that is not so easy and therefore the validation is very important.

So big topic is diesel BS-VI we see it as challenging but on the other hand also see it as good opportunity. Bosch is best prepared because worldwide technologies are available. We do have the basic systems and we do have trained people in this area and we do have the facilities and the infrastructure to do these calibrations. So we are prepared and we are as I said in discussion with all our customers to support the transition from today to BS-VI.

There is one last point I want to mention BS-VI is not yet notified. So we do not know exactly what the target is and as long as it is not clear of course all that is extremely difficult and I already have to tell you now when you ask questions what are the main because we do not know where to go we also do not know what all it means and what the required steps would be and we hope that there will be some clarity within the next months on the target. But at the moment there are quite a few uncertainties.

The third point here on this slide is two-wheeler Engine Management Systems where actually we have made some good progress in the last years, we have made a conscious entry and said there will be a technology change from carburetor to Engine Management Systems and we are seeing this now in the larger bikes we have good projects with many of the engine and international OEMs already and also here with BS-VI this strength is going to be strengthened which we will of course support and serve the market.

Bosch Limited business divisions. We have four business divisions on the left side which we call as Mobility Solutions and we have four divisions on the right side namely Packaging Technology, Power Tools, Energy and Building Solutions as well as Thermotechnology and Security Technology where we say this goes beyond Mobility Solutions. As you may know, Bosch has four different business sectors. The main part is Mobility Solutions and the others are industrial technology where packaging technology is a part of consumer goods where power tools is a part of and energy and building technology where energy building solutions Thermotechnology and security technology belong to. So we are present across all the four different business segments of Bosch worldwide with a majority. So to put it simply, so 90% or currently about 87% in the left four divisions namely diesel systems, gasoline systems, automotive aftermarket and starter motors and generators. And this starter motors and generators is what I want to talk about now.

This consists about 10% of the turnover of Bosch Limited so very simply non-mobilities for boxes on the right, 10% starter motors, 10% and the rest about 80% of the business. The starter motors and generators division in India so our short term of this is SG-IN India operates within

Bosch Limited and is doing manufacturing and sales of starter motors and generators for all segments of the automotive market. This was established in India in 1989 has been with Bosch for very long but in India only introduced in 1989 in our Naganathapura plant close to Bangalore production.

We have broken even only in 2013 and since then operating at low margins but positive. The business is very different from the other automotive business wherein diesel and in gasoline we have high technology products and we have technological differentiations in starter motors and generators business, this is commodity business driven by cost and by price pressure and the technology is not a key differentiator and this leads to the relatively late break even in India. And also today if you look at the chart on the bottom right, we have 10% of the turnover is contributes to only 1% of the EBIT of Bosch Limited.

Not coming from India but from the global business, in the middle of last year there was a decision of the parent company Robert Bosch GmbH in Germany taken and announced to look for a partner or a buyer of this business including all the different regions and this then has triggered discussions what are we going to do in India and this is what I am going to explain to you on the subsequent slides.

We have a strong dependency of the starter motors and generators India business on the starter motors and generators global business. The main points are the first three of this slide. So the export share of SGIN is very high 35% to 40% of the revenues from exports which is supported by SG Global. Second point the key products are part of global platforms although some have been developed for emerging markets for example also together with China and Brazil to meet all the different markets the technology belongs to Bosch Global and the division is highly depended on the global business for products and process competency.

The IP of the SGIN products belong to Bosch Global with license is granted to Bosch Limited and fourth point also there are quite a few proprietary tools and platforms which are used by the division in India. So it is not an independent standalone business we are talking about here but it is an integral part of a worldwide business with very many dependencies from the worldwide business. And this leads to the rationale for the carve out which goes beyond the dependency where the dependency is the fourth point which is here listed as number one. So for all people on the phone I do not know I assume you have the slides. We are on page 8 currently. So the high dependency on SG Global. Locally we cannot run that business profitably without the global starter motors and generators support so basically we do not see an alternative to continue this within Bosch Limited on our own.

The employees we have some 500 employees and if we kept this within Bosch Limited but then could not run it profitably of course these people would be affected. The customers expect that they will get continued updated technology and this has to be aligned with the global business and we must see that we avoid any adverse impact on our customers because the customers would

say this Bosch, Bosch has disappointed us and it could also have some negative impact on the other business. Therefore, it is very important that the commitment also of the Bosch Global Management to look for a partner or buyer who is going to continue and he is going to grow this business to see that there is continuity both for the customers as well as for the employees.

And last but not least the shareholders. If we take out 10% of our turnover with only 1% of our EBIT. The profitability of Bosch Limited is going to increase and this will allow Bosch Limited to focus on the specific strength which is technology, technology products for example for BS-VI emissions and not continue on the commodity products which is not the core Bosch strength. And therefore in summary it is in the best interest of all the stakeholders to sell and then transfer the SGIN business and we think that this is a win-win for all the different parties.

We have done or actually two independent companies have done a valuation and a fairness opinion and the premises of this we want to do it as a going concern by way of a slump sale because that is the fastest and cleanest way and we must avoid any uncertainty. What is very important also if you look at the valuation is that land of approximately 11 acres on which the operations are carried on in Naganathapura close to Bangalore this will continue to belong to Bosch Limited and will be leased to propose new subsidiary at the market value initially for a period of 15 years. Hence there is a contingent consideration clause so in case the Global SG transaction gets executed within the next 18 months and results in a high implicit price for SGIN there will be an additional contingent consideration payable by Bosch GmbH to Bosch Limited. So if we introduce the price of higher then there will be an additional payment by Bosch. And all this we want to do because of course we as management care for all our shareholders and we must see that this is done in a transparent and in a caring way.

So what have we been doing so far and where do we stand in the process? There has been an independent valuation done by KPMG with a recommended enterprise value as on 30 November 2015 at Rs. 486.2 crores to be precise and Ernst & Young has given the fairness valuation and they opined that the valuation by KPMG is fair and reasonable and in addition they actually recommended the option for the contingent consideration to be sure that there are no surprises and then afterwards the minority shareholders may be disappointed.

As I said earlier, the Audit Committee and the Board have approved the transaction subject to the shareholder approval and including the proposed contingency consideration as recommended by Ernst & Young and now the next steps are that this will be put on vote basically throughout March completely and the Bosch Group will not participate in the voting.

So the summary automotive market production is subdued over many years but we have been growing faster than the market. On the technology front, BS-VI, Bharat Stage-VI emission legislation discussion I must add is the most dominating topic for us which is challenging but also gives many opportunities because overall we are very well positioned to support this and we are currently working with all the OEMs to meet the challenging timelines. And on the

realignment of the starter motors and generators division, which was announced in June 2015, we cannot continue to run the business independently in India.

The Board of our company has in principle approved the transaction as described before. We have done a transparent process with valuation, fairness valuation from two major consulting firms and taken also additional precautions. One being that we do not sell the lands which is not included in this price and the other is the contingent consideration to safeguard the interests of the company.

And therefore we would recommend all the shareholders to approve in the voting which is going to take part in March of this year. So with this, I am at the end of my presentation and as promised left a lot of time for Q&A and I am looking forward to the steps we can start with the matters specifically presented now and then afterwards take it to a wider scope and also discuss any other matters of interest to you. So thanks for your attention. I will not go into this, but I always end my presentations Bosch is 130-year-old company as you know with strong values and driven by the later founder Robert Bosch and continued by all the management worldwide. And with this I would open the floor for discussion. Thank you.

**Sanjay Doshi:**

This is Sanjay Doshi from Reliance Mutual Fund. As we are focusing on the topic of starter business and most of the business which we are going to be selling to our parent this is a contingent payment if the sale value for parent is higher. So where is the India value pact today? Can you please understand that how do you determine what is the India value with respect to the overall business?

**Steffen Berns:**

The India value with respect to the overall business at the moment it is not determined but when you do a sale of a global business only for tax purposes you have to determine and say what is the value of the different businesses. And then this will be figured out and then you can say the total business is 100 and India is at 10, you get a pretty clear indication. And if it is unclear we will again ask the consultant firms to make it clear and to say has this value been exceeded or not.

**Participant:**

It reads is that you will be first transferring the business as a slump sale to the subsidiaries and thereafter there will be a divestment. So would that require you to go to the shareholders quite?

**S. Karthik:**

It is the only one because the transaction where Bosch Limited is involved, is transferred to the wholly owned subsidiary of the global one. The subsequent transaction is between the global subsidiary and the global buyer. So the transaction is completed the consideration we would have received in the Phase one.

**Participant:**

Subsidiary of Bosch AG not Bosch India.

**S. Karthik:**

Yes, exactly.

**Participant:** And I have another question for Dr. Berns. As your first slide show that you were at 1.5 million units for the last four years, globally you have about 66% of your turnover in mobility solutions. Is not there I mean the rest of the sectors which you are in consumer durables and buildings has grown much faster than last time. Is there any vision or any plan on building on those two segments in India?

**Steffen Berns:** You are right, that in India we have a much higher automotive or mobility solutions as we call it today then worldwide and we are talking here about Bosch Limited but we also have other Bosch Group companies outside Bosch Limited we are doing certain business. But even for those the share does not look very different. So also for Bosch Group overall automotive share is relatively high in India as compared to worldwide and this is because the automotive market developed first and then the consumer and capital goods markets in India are not as strong yet and this confirms your assumption very small potential in this. We have in Bosch Limited targeted power tools for example long time ago. Power tools is a business which in Europe is considered as consumer.

So everybody has I mean I always say I have some 20 power tools at home and if you look at the rates of professional carpenters in India they will not reach the 20. So there is a big difference and therefore also some growth potential, how fast this is going to come is a question. It is going to take some time and we always also as Bosch Global there should be a balance between the four business sectors and automotive or mobility solutions should not be so big because if you have four legs and the legs are equal sized that is an advantage or if they have more equal size that is an advantage.

On the other side we never consciously said we have to slow down the growth of mobility solutions because the other strips become bigger. So if there are opportunities in mobility solutions and there are plenty currently, of course we will take care and therefore we do not have a target to say from 13%, 14% today we would like to reach plus x in y years. So this is not what we finally we want to grow there, we try our best and in some areas we are very successful and some areas are not and others. So this changes but the potential is clearly there.

**Jayesh Shroff:** This is Jayesh from SBI Mutual Fund. I just wanted to understand the tax implication of this transfer?

**Steffen Berns:** I am not answering this, what?

**Jayesh Shroff:** Tax implications?

**Steffen Berns:** Tax implications, this is your thoughts please?

**Jayesh Shroff:** See the reason why the slump sale method was adopted is that from a tax perspective that gives the best advantage for the company, one. And slump sale also ensures that land need not be

transferred. So other than the land the whole business is transferred. So that is why from a tax implication point of view we had thought to go this kind of process?

**Participant:** So what is the tax rate that we will have to pay on this transaction?

**Management:** I think that we have still not completed. We will get back to you.

**Participant:** So what is the contribution of the Indian business turnover in the global business which has been carved out of the subsidiary?

**Steffen Berns:** So turnover it is in the order of magnitude some 10%.

**Participant:** For the global?

**Steffen Berns:** India of global.

**Participant:** And the valuation is also similar for that global business which has been transferred?

**Steffen Berns:** So the valuation I do not know. So there is the approaches are different in India we have to do the two phases. One is because it is a listed company we have to shift it with a proper valuation to this 100% subsidiary of as it called Robert Bosch Starter Motors Generators Holding GmbH and therefore we had to do this valuation. In the rest of the world it is shifting from 100% or from 100% to 100% and therefore these discussions do not happen. And when in the end there will be a valuation for the overall package. In India we are the only public listed company.

**Participant:** means Private Limited, just to clarify?

**S. Karthik:** Yes, the other point on the tax was obviously that you are seeing it is operating from 1989. So through slump sale it will come under long term capital gain which has a far lesser percentage as compared to the corporate tax. That is point number one. And the other point what we also wanted to mention here is that overall slump sale gives the best kind of tax exemption than if you are selling a piece of it. So that is why we have opted the slump as a going concern because then you are not value each business separately. So if you go by that methodology, on the total net asset value that would form the base. That would be somewhere much lower than the Rs. 480 crores. So for the differential you will apply the long term capital gains with the indexation what was got.

**Participant:** We are moving out one business from the listed entity so is there any business that can get added to?

**Steffen Berns:** Currently this is not so if you look into Bosch has no business under discussion which will be transferred and actually by now we are in India having all this major business which Bosch is doing globally. If there is any opportunity for us to grow internally this we are looking at of

course all the time. But it is not anything automatic which now at the moment is for offer from whomever we say we would like to take it, that is not available.

**Participant:** Just to add to the question on the share of turnover. Could you comment on share of profit of the Indian business to Bosch global?

**Steffen Berns:** Sorry I cannot comment on the Bosch Global profitability of this business.

**Participant:** Secondly, you mentioned the timeline of 18 months in case the deal goes through for SG Global and there could be some adjustments to the consideration. What if it does not happen in 18 months?

**Steffen Berns:** The 18 is I think very fair offer typically you have six to twelve months in such clauses so we said 18 but because so many boundary conditions are changing and there may be some new technologies coming in or whatever. So if it is not being served then the contingent.

**Participant:** You cannot say for value of the company?

**Steffen Berns:** Then there will be no additional configuration Yes because then you never know was it because the business developed so well in the 18 months or the markets overall are whatever. So therefore it is valid as 18 months and then this clause is going to terminate.

**Participant:** And lastly on the 11 acres of land that is retained to Bosch partly to the new entity. So for example I mean after a period of time since it is no longer the Bosch Limited why does not Bosch limited hold on to the land and the new entity finds its own location to set up? This is the land. Why should the leasing land on a very, very long term basis to another entity like this? I am hoping that we would also expand our existing businesses at some point in the next 15 years?

**Steffen Berns:** Yes, so one part is that Bosch Limited has lands to expand the business further so that is not going to be a constraint. The other point is that we have an interest for the employees that the business is continuing in the current location. And that is not immediately the company moves out and say we have some other place where it is with different conditions better for us to manufacture. And this is going to give stability and which is as I said very important that business is continuing in a fair way looking at the employees and also looking at the customers. And that is the driver to do this.

**Participant:** So on this whole controversy which is there in Europe as of now in terms of the Defeat Devices and all in that Europe in the car market per se would shift more the American way in terms of being more gasoline and less of diesel going ahead?

**Steffen Berns:** We now shifted diesel this cognizes is okay for everybody. So we some sectors starter motors and generators or should be.

- Participant:** I have one question on?
- Steffen Berns:** I do not forget your sorry, I do not forget your question but perhaps we can finish on starter motors and generators then come to diesel afterwards. That is fine for you?
- Participant:** I just had one question on, globally not just in India as a part of Bosch Global?
- Steffen Berns:** Well, very rough in the occasion globally it is much smaller than it is in India. So rough indication is something like 2% will be the most. So any more questions on starter motors and generators and this proposed sale? We can perhaps also ask the colleagues on the phone whether they have any additional questions from this part?
- Participant:** just one small thing. The consideration part is also for the if the parent goes for a JV do you think that is also is the contingent consideration part may be we have taken into form?
- Steffen Berns:** Yes. So are there any questions from the colleagues on the phone?
- Moderator:** Sure, thank you very much sir.
- Steffen Berns:** So okay we can still have questions afterwards from the phone. Your question on the diesel. So there are different points of your question which are put together but I would like to divide and separate. The so called Defeat Device is something which is happening in public discussions but I think it is not going to have a major impact on diesel overall because as I said diesel can be a clean engine and diesel is a clean engine in most of the countries if it is supplied according to specification.
- There will be some changes in the detailed specifications now worldwide based on the discussion and how far are the cycles represented to it for wheel driving. And this discussion is currently going on in Europe specifically and this will make the permissible limits tighter. You have to differentiate today a very large percentage of the cars a very vast majority of the diesel cars are operating within the permissible limits and there have been apparently some exceptions. Now the next step is going to be that the permissible limits will be redefined to make the diesel even cleaner and with this then there will be no difference between exhausts levels or no major differences between exhaust levels between diesel and gasoline cars.
- And therefore from the perspective of tailpipe emission there is no reason not to drive the diesel but there are many reasons to drive diesel vehicles which as I said is the CO2. The vehicle manufactures have to meet CO2 targets which are very stringent and there are different ways to meet these. You can do it via hybridization or via electric vehicles or via diesel or via different combinations and also get some target injection helps to meet this. So overall you have to have a mix but diesel is very good approach especially for by mileage vehicles. You have low end torques. Earlier this was described as front drive but it is not much there is the front part that it

has many advantages in your acceleration etc. which you want to pull out and other areas you have benefits from diesel vehicles.

And therefore we are convinced that overall diesel vehicles have a good future and they are very good proposition. The picture may change one day if there is a break through on the battery technology for electric vehicles but this currently is more a hope than sorry then a clear scenario and therefore for the time being we assume that the diesel share is going to be very high in Europe and also that we have good potential in India.

**Participant:** Just a follow up on that is that even in India we have heard noises on from the government sources saying that some companies have been using this in India similar defeat devices. So can I know have we received any enquiry from the government side in terms of cooperating with them and in terms of the enquires that we may be conducting?

**Steffen Berns:** No, we are not under scanner. And the work splits which is slightly complicated to understand between the suppliers and the manufacturers typically is that the supplier provides the basic functionality and then the specific data of how the applications are made are done by the original equipment manufactures. And therefore we are not directly involved and then we are not aware of anything in India.

**Participant:** And what is if the technology driven by Bosch on the emission issues the European side it was the design was based on the customer's requirements we have just supplied the designs the competitive design. So in future there would not be any further liabilities on Bosch itself. Am I right to say this?

**Steffen Berns:** The work split is that we define and supply hardware and Bosch supplies the basic functionality and we also provide some functionality which is specified by the customers. So the matter what can you do with a function it is very difficult to be evaluated. So if you take a trivial example if you have a hammer you can use it for putting a nail in or you can use it to kill somebody. And this wide range of there are thousands of functions and how you combine these different functions and what you do with them for a supplier typically is not possible to see and to detect and we do not know what the final procedure is which is then applied in field. And therefore our understanding is that we cannot be held liable for this.

**Participant:** Sir, in the previous question you mentioned that if there is a breakthrough in electrical for your battery technology diesel engines might get risk. Could you explain that further and how if Bosch globally trying to mitigate that front?

**Steffen Berns:** Yes, we will not be referring to diesel engines only but to combustion engines. It is there it is the technological change over then this may have some impact on combustion engines including also on diesel engines and the electric vehicles and different types of hybrid vehicles have been under development for many decades and now people are saying the first engine was electric vehicles

actually or the first vehicle was driven by an electric motor. So it is going over many, many decades and has some ups and downs and also some promises.

The main challenge on the electrification which includes hybridization and which also includes electric vehicles is on the battery technology to say how can you get sufficient energy density and sufficient power density and perhaps recharging technology at an affordable cost. And also safety aspects which are also important. So many different sectors and what currently available is good for very light vehicles with a limited range or very expensive vehicles. So, little bit some of the golf cart applications where it makes a lot of sense. Bosch is propagating electric scooters and actually Bosch is very strong in electric bikes which is the high end bicycle market with a lot of convenience especially in markets like Europe and United States where populations getting older and people say, sorry, I do not need a car I can also use a bicycle but it is easier to go it and you even have mountain bikes now with electric support.

So that is an interesting market but this is the lower sight where you have light vehicles including bicycles where you do not need that much energy to drive them and where the range typically is not that high. On the other side you have your one of the most famous examples of Tesla where you have a high end sports car and people are using this and these are the two pockets which seemed to be successful and in between you have lots of different vehicles which currently occupy only niches because the price is relatively high and especially with the currently low fuel prices for conventional fuel the TCO it is not very attractive.

But there will probably be two changes. One is the further substantial development of the battery technology and many companies are working on this and we also think that in the long run the fuel price is going to go up again which will then turn the equation. There are three major trends in Mobility Solutions. They are summarized under three words. One is automated. This segment is connected and so it is electrified and on all these three areas Bosch is working and the electrification Bosch is offering electric motors. Bosch is offering power electronics and Bosch is also act as in the battery field. Currently mainly on the development side and on the research side but last September for example Bosch has bought a company which working on solid state batteries. So also looking in to future technologies and this is not going to go to market in 2017. So it is more R&D but we are very much looking in to this. So Bosch is very much looking in to this because it has such a high potential for the future.

**Participant:**

Sir, I had a question on EURO VI. Bosch as of now has a monopoly in Euro III and EURO IV in India but with EURO VI, BOSCH has so much of competitors in the Europe. So will see a change in competition especially from the Indian market analysis. Do you see a high competition coming in India? So at least with respect to Euro IV, we don't have much competition. So how do you see the competitions taking place?

**Steffen Berns:**

So Bosh has always had competition, competition that always turns to compete and to do the business and was a question which areas to approach and it was a question of local competence

and local economies of scale if I want to put it very simpler. I cannot comment on the country's decision of the competitors and of course we always try to beat the competitors and offer more interesting propositions to our customers, and this we are also going to do in future. The question, how this is going to look like? Nobody can answer. As I said, we see year six as challenging for the overall industry and we see it as an opportunity for us because within the overall industry we are relatively well-prepared or we are very well-prepared because on a worldwide scale technologies are available and in India where we have a good base we are looking at manufacturing competency, looking at celebration competency and also some other factors. But I assume that competition as with any change also sees business opportunity and they will be very active and we have to face this. But the outcome as I said in the beginning not even the target is clear. Year sixth is not defined yet, therefore we have to think in scenarios and say what happens to BS-VI means this or better or something else, what would be the system and if a known industry has to work in this fuzzy unclear space and work on scenarios and then say we have to be ready once it is clear what BS-VI means, we then have to take a call and say we go in to this or that direction and then the customers are going to look for the right suppliers and we are prepared and well positioned to have a good part in this discussion.

**Participant:** I also wanted to know about plans with the E-Clutch, because AMT is getting good traction, do you see or what is your take on that E-clutch?

**Steffen Berns:** Yes, you are right, it has not been introduced, it has a good potential, we are still in discussion with many customers and as you see there has been no introduction yet but we are still optimistic that it will find a good market.

**Participant:** I'm Swati from UTI Mutual fund, Curious to know the response to the defect devise episode and response to OEM and what happens to relation

**Steffen Berns:** I do not know what your question is about, so you please have to certify, and as I said earlier in India there has been on issue about this.

**Participant:** No, I know that, I am saying that I am just curious to know what happens to the relationship with OEMs are there any learning's, are there any risk mitigations that you need to do so that apart from the liability fixing which you just mentioned but what happens to the relationship with **OEMS, once they know that there is a defect?**

**Steffen Berns:** As you can see here on this slide, we have right in the center the slide of liability, credibility and legality and this is very important not only in India but also worldwide and if we at Bosch find out that there is something illegal being done with our devices we will have discussions with our OEMs about this and OEMs as per my understanding, the manufacturers see this the same because Bosch has already said in the long-term only an honest and legal approach is of therefore the targets are the same and the Volkswagen learning is definitely the impact can be so huge if you try something like that that this must be avoided in any case. And I think there the industry

has a very common approach and there is no one against the other in trying to be most creative to hide something but to say we are not tolerating anything like this. And therefore your question does not arise from or I do not understand that at least but I think there the industry overall is very clear to say we have to meet emission legislations and specifications and it must be very clear and if somebody is questioning this we must be able to prove it.

**Participant:** Can I move to a balance sheet question if it is alright. As per your March 2015 balance sheet you have between investments and cash about 4,000 crores, net block is about 780 crores, now you get another 500 crores approximately or 600 crores from the sales of this, then you obviously do not have that kind of CAPEX plan and how are you going to carry that much of cash?

**Soumitra Bhattacharya:** Actually, you have seen first of all our full objective has been to focus on cash flows, so it is a positive so let us start with that and we are focusing as some of you said before the meeting very clearly to get all our basics right from the on working capital to efficiency improvement and we discussed in the last meeting also. So our that focus will continue, to if we have to have this problem, if you call it a problem, it is not that bad, so let us start with that. Secondly, you must have seen also after CAPEX that if you look at the previous year's where we were touching around 500 crores average, we have moved anywhere between 650 crores to 1000 crores. Thirdly, if you look at our previous balance sheet we looked about being fit for the future and being ready for the future and you must have seen that that has been a lot of focused approach on growth areas, we opened our Bidadi factory, we opened our parts factory in Chennai, we opened a gasoline factory Down South. So these focuses will continue. Then we have a very-very focused process-oriented treasury management system. And lastly, you already heard what Dr. Berns mentioned that we are open to looking at new business. We have also done a major change in our headquarters which we call art boutique which is moving from a manufacturing-oriented headquarter base to a tech-oriented headquarter base. So those of you who come to Bangalore will see now a couple of multi-storied buildings already up and more to come in the future where a lot of our software colleagues are coming into this tech park. So in summary, we will continue to focus with cash.

**Participant:** And hold it in the balance sheet?

**Soumitra Bhattacharya:** No, not necessarily. Second, we have improved on our CAPEX. And third, yes we will have an effective management system because you cannot do away with it and we are very open to looking at new businesses which make sense, which are linked to our Bosch story line. Lastly, we do a lot of work not only within Bosh limited but with our other sister companies, we have got eight legal entities of course in a very clear arms length transaction. For example, our colleagues from Bosch Engineering Services are going to come to this Tech Park again at a very clear arms length transaction on the rentals that we are providing. So we see this as an opportunity more than a problem and we continuously seek avenues on how we handle the issue.

**Participant:** Sir a couple of questions from my side, one is on the two wheeler side. In the presentation you have mentioned that there has been some progress on the engine management system, can you just elaborate what is the penetration today and do you see emission norms being pushed for this kind of a product? And second on the cars, how do you see the penetration of turbocharged engines and what is our market share?

**Steffen Berns:** So first on the two wheeler side, as I mentioned we have penetrated the market, we have entered with a large number of OEMs where we are in few production but it is coming top down, so the high end ends first and then it is then curtailed downwards and we are in development of local solutions also to have attractive value propositions for the lower segment and this is supported, which will be supported by emission legislation, as I said it is unclear, but currently we assume that with BS-VI you will need to shift to engine management systems and there will be a transition from the carbureted engine to the engine management systems. I have said earlier that once you have electronics on board you also have the scope for additional features, functionalities, benefit, you can for example help your bike with two different engines depending on whether you want to carry heavy loads or you want to run fast or want to be in fuel savings modes, etc, you can have antilock devices integrated, you can have many additional features possible which I think also is attractive for the smartphones that we at least with urban but also rural two wheeler owner to be used as additional benefit once anyway you have electronics on board. So I think that is a relatively clear path, again with a question mark on the exact specification, notification of the BS-VI norms. The second point on the turbocharged engines, I do not have the exact overview on turbocharger distribution in India, the worldwide trend is very clear that even passenger car diesel engines are all turbocharged and that there is a very strong trend in gasoline also to do in for direct injection plus turbocharger. There is also the option to do part fuel ejection plus turbocharger, so this is the question in the end that how you optimize your vehicle and what fits best to your strategy, I cannot give you the exact volumes and I do not know this currently for India.

**Participant:** About market share sir.

**Steffen Berns:** I find Bosch is not active in turbochargers in Indian applications.

**Participant:** I wanted to understand, if traffic were to go through for trucks, if it were to happen, are you prepared in your assembly capacity for supply chain to catch up with such demand?

**Steffen Berns:** The question is how fast some replacement would happen, if you want to replace all the old trucks within three months, we are not prepared, we have to see the specifics overall we have sufficient capacity to provide to the market and then it is going to be a question for overall industry, so it is not only Bosch but it is overall industry today that would be very steep fight or what just happens throughout the year or two years or what so ever, at least we have currently we do see this as an opportunity not only for our business but mainly also for the environment because that is the best you can do. It is not to say whether there will be a few additional BS-IV

engines launched or not but what do you do with all this BS-0 engines on the road. So this would have a major positive impact but the volumes and dimensions is very unclear, it very much depends on the program.

**Soumitra Bhattacharya:** If can give answer to one question, if you take 2010 which is not shown the graph, all of us know that is the year that automotive industry went through the roof, so (+30%), Bosch went (+40%) and in diesel it was even higher, we supplied everything. So we are not talking of now this three months and six months which is not realistic but we always ensure that we put a CAPEX in place, we look at our supply chains, we stress them out, we look at different shift models. So we try to follow the Indian trade cycle of volumes or freight and every five years or seven years it comes through.

**Participant:** Secondly sir on the smaller bikes, 100 cc, 125 cc or 150 cc, what could be the cost implications of going from a carburetors to Engine management system and what is the complexity there to provide a low cost solution because there the ability to price the product relatively with the manufacturers is much, much lower, the pricing power is low, it is quite a competitive market.

**Management-2:** I am not able to share with you today how the systems are going to look and what the price could be, but for us it is very clear of course that it has to be very competitive because since you said it is a very cost or price sensitive market segment. On the other side, the solutions we are looking at the moment will not prevent any bike from being sold. So this is not having any major impact from the overall bike cost

**Participant:** What will this do the total cost of ownership, I mean how would it impact the fuel efficiency when you go from carburetor to the engine manufacturers, what kind of implication it will have?

**Steffen Berns:** We will have fuel economy a few percentage points, it depends on how many kilometers you drive. So the bike owners do not calculate TCO but they say I always refuel for Rs.200 and therefore the calculation is typically different. But it has a positive impact on fuel economy and therefore also on TCO but it is always the question how much we have to pay upfront for the bikes and how long does it take them to get this payback. We are convinced because of fuel economy, because of emissions which have to be met at a certain point in time and because of the additional advantages which I pointed out earlier of having electronics on board and having additional functions. But this will come relatively soon and we earlier assumed also not 100% penetration but a significant penetration even without emission legislation. And of course emission legislation then is going to help additionally.

**Participant:** Can you please help me just in terms of BS-VI norms is not notified but just in terms of if you look at Euro VI and try to overlay that on the auto industry in India in general, which are the clear pain points, for example in LCV Indian can be easily taken to BS-VI norm or for that matter let us say car with less than 4 meters with all the required technology needed for Euro-VI. Are these going to be more difficult, so can if you can just highlight where are we set in?

**Steffen Berns:** There are different aspects to this question. One is, there are specific India solutions on the roads, for example, 1 ton pay loads like commercial vehicles, that is a market segment which does not exist in any Euro VI country and therefore there is no Euro VI solution available but has to be developed first. The second point is, as I mentioned earlier that the driving cycles and the load profiles are quite different in India and therefore you cannot just put a Euro VI on an Indian road and say now it is BS-VI. That is in your laboratory, but if you drive four weeks on Bangalore roads you may get a problem. So therefore you have to, what I explained earlier because the regeneration is not working because typically you need certain load and certain temperatures to regenerate your exhaust gas treatment system. Therefore you have to develop specific means, technicians say you have to enrich the fuel under certain condition so that the fuel ratio under certain condition so that you can increase the temperatures and then regenerate your exhaust gas system, this has to be specifically developed, we have done a lot of work on this and we are confident that for the existing vehicles solutions are possible but this has to be adjusted to every single specific vehicle, that is what we then call calibration and it has to be validated with the specific Indian fuels. And the third part of course is the economical equitation that looking at the TCO I am saying if you have a very cost sensitive market in India are we going to increase the engine cost and the vehicle cost dramatically and is then diesel still a viable solution. And what we have been successfully doing on the BS-III and BS-IV is that we developed specific engine solutions because the boundary conditions are slightly different, the requirement are slightly different and the markets are so cost sensitive, we have been trying to develop specific India solutions and because BS-IV was not anticipated for 2020 to develop such solutions is going to be challenging in the existing timeframe. And once when you have your solutions which are derived from Euro VI on the road whether you change it back, because that is additional effort for calibration and for validation, again this is a question mark. So therefore from the feasibility of really finding local solutions for the local challenges, that is the third dimension and all this we have to evaluate and we will do so once the notification is available.

**Participant:** To take this question forward, do you think there is necessary to use GDI engine technology for EURO 6 or can we add some system with to the MPI 5 engine with also achieve the Euro 6?

**Steffen Berns:** We have to differentiate between diesel and gasoline, to put it very simply, gasoline from the emission point of view we know what has to be done and that is relatively simple and this is now depending again on the notification which we do not know yet but we assume that meeting BS-VI for gasoline is much simpler than for diesel. So what I said earlier applies to diesel.

**Participant:** MARUTI Baleno has GDI system, do we supply to them?

**Steffen Berns:** Sorry, I cannot answer this, I will have to think about it but sorry, I am not prepared for this answer.

**Participant:** Could you talk about specific initiative regarding the aftermarket, what is the medium-term plan for growth, etc.?

**Steffen Berns:** So the aftermarket because of liquidity problems in the last year's and because of large parts of fleets off-road has slowly it has grown throughout but not developed very strongly. We have invested heavily in aftermarket to be prepared for introduction of common rail for example, we have also increased our portfolio of trade parts and throughout strengthened the network and therefore we see good growth potential for the aftermarket and really going to continue. I cannot tell you specific numbers because there are too many influencing factors on this but I think overall aftermarket is a strong pillar and we of course expect it also to remain a strong pillar.

**Participant:** Also, you earlier talked about three global trends in terms of automated, connected which requires a lot of software in the vehicle and typically a domain where India is more efficient and much more well developed. So is Indian subsidiary playing any part in the development of or movement towards these new global trends?

**Steffen Berns:** As Mr. Bhattacharya said, we have several legal entities in India, I also mentioned this earlier, and the software business is part of Robert Bosch Engineering and Business Solutions Private Limited and not part of Bosch Limited and the benefit we are having from this software company, not only that we are landlords to them but the more important part is that we have a huge pool, this is the largest R&D center of Bosch outside Germany. So we have fantastic competencies there, this is one of its strong points because they are also developing software for example for Euro VI engines and we make use of this, we are just across the road or in future part of our campus, so there is a good cooperation in part with this entity, but we do not have plans now in Bosch Limited to build up additional software competency which will make use of the software competency of our Robert Bosch Engineering and Business Solutions, same as Bosch Worldwide is making use of it.

**Participant:** Just a follow-up on this is that, nay product that Bosch, the parent company develops on any of these three trends, will it flow in India through the still entity or through any of these subsidiaries?

**Steffen Berns:** So on the automated and connected, this is not part of our portfolio as Bosch Limited on the electrified, if you look into hybridization, especially what we are discussing currently on the hybridization, this is the system competence of Bosch Limited. We are not having at the moment larger projects in strong hybridization and electric vehicles.

**Soumitra Bhattacharya:** But we fully utilize the benefits of all the sister companies, which means if you look at what we call as Robert Bosch Engineering & Business Solutions and if you look at automotive electronics company we have for ECUs So we have very close and good synergy and final product goes out either from **partly** in diesel and gasoline through the OEMs. So we have a very clear push and pull strategic as well as operator relationship within the Bosch legal entities across India.

**Participant:** You mentioned that the aftermarket for the common rail infrastructure could you just elaborate is the new BS-IV norm itself driving more aftermarket sort of changes that we have seen that you are actually positioning aftermarket...

**Steffen Berns:** We are talking about introduction of common rail which is work in progress or I would say it is more or less done and there are different common rail systems for the future which are going to be developed. What is needed are specific test benches, so this is relatively sophisticated and also expensive infrastructure for the workshops to do checks once the customer comes and if there is something not okay to find out what the problem is and to correct it if possible. And there you need additional investment for your workshops and here we have achieved a very good coverage now in India to support the customers who are coming and saying they need some support on this. Overall, the systems become more robust and we hope that the fuel conditions in India also will become more robust and this would be a counter effect for the aftermarket business but of course would benefit the end customer. So how this is going to work over time we will have to see.

I missed this, we said at quarter past 10 we will ask the people on the phone. Is there anybody on the phone who could like to ask question now?

**Participant:** What is the current level of indigenization which is there in the current **BS IV emission engine** and what level we can achieve there?

**Soumitra Bhattacharya:** We have a very fierce system of localization, so if you look at the first set of Scorpios which had common rail injection systems when we started this very high level of import, but very quickly we started localization so it will definitely give you a small roadmap, first what we do is we look at volumes and then we start doing a clear localization. Anywhere between things which are nascent they could be as low as 35%, 40% and they could be as high to 65% to 70%, in case of conventional products they go as high up to 90% - 95%. So we clearly look at not only the product but we look at the components and then we look at the systems. If you look at aspects in India like even materials like steel, that takes about minimum between 2.5 years up to 4 years to develop, so that also we will take into consideration. So short point, lack of conventional products we have a very clear roadmap product by product whether it is for the pump or for the injectors or for other products and we only localize where it makes sense in terms of both quality, safety naturally comes at the first to do risk mitigation and then we look at of course volumes and cost. So quality comes first and then we float that but it is a very clear process and our suppliers also go through this process of validation and assistance and of course we take it to aftermarket. So currently for the BS-IV localization which we have it is specific to particular product and when it was introduced, because if I give you a generic number it is not correct, within the new generation products that we introduced over time. So as I said, we will start off slow but those which have reached a high level of maturity go up to 60% we go up to 70%. So that is the roadmap there. And we have different generations, different products both for the pump as well as for the injector, but very clear focus on localization under the perimeters of the

damage and the supply chain is managed. Lastly what we are right now doing is, we are doing a very strong regenerating the whole supply chain, we are optimizing our supply base, we are looking at their ability holistically on how they can cater to our products and processes for the future, we have systems like how we introduce new suppliers, how we make them from essential and then go to preferred. We also do not shy away from deleting suppliers, but again in a very Bosch way of ensuring ethics, values and overtime phasing. So very clear focus towards improving the supply chain across. And our central purchasing system which works very closely with the regional organization ensures a global reach and bundling effect, so called limited.

**Participant:** Sir, just had a follow-up question on **E-Clutch** we essentially get from market that demand for automatic is far ahead of the supply, so in environment like this one would have thought our offering would get a lot of traction, so where is the gap with respect to what the market environment and when do you see the first vehicle powered by an e-clutch hitting the road in the time to come?

**Steffen Berns:** I think the varying proposition of e-clutch is very positive, we have some internal issues with one of the components which lead to a delay, so it was not market driven. But we are very confident that this is going to be overcome, I cannot give you the exact date but then I think because of the advantages described earlier we are confident that this is going to find a good market.

**Participant:** Also mentioned on the trading part of portfolio in terms of the aftermarket so just elaborate what are the areas you are looking at over a period of 9 to 12 months and what is the sort of profile if you cannot talk about margin but is there a certain level of profitability that needs to be justified, what is the sort of thought process on this?

**Steffen Berns:** No, we always look at the complete portfolio, we have our specific market approach where we address the different market segments like trucks or passenger cars or two wheelers separately and then look at the products which are needed and of course we want money with this business and if there is a chance to grow profitably we are going to take additional product and we have also taken some conscious calls where the margins were not sufficient to reduce certain product and take them out because for us it is not bottom-line but it is serving the customer with what you need. So have a sufficient spectrum but in the end always is it the bottom-line we are making with these products. I cannot tell right now here because it is going to share probably what exactly we are going to do next but you can assume that we are going to further increase our product spectrum and are going to develop suppliers further and with this extended range also keep a decent margin in the business we are doing here.

**Participant:** I wanted to understand, in the aftermarket how much do you lose to the spare parts and what are they doing to retrieve that part of the market?

**Steffen Berns:**

Yes, it is few spare part in India is an issue. It is difficult to assess exactly how big it is but there are ACMA committees working on this and my colleague Mr. Bhattacharya can elaborate a little bit on this what all we are doing. We are doing rates on the one side, so together with police they say spurious parts being sold because it has a very negative impact on only on our sales but also on the image if spurious parts with low quality are being sold that could also be safety issues and then the end customer things he is getting a Bosch part and he will blame Bosch for this. So there is a lot of negative implication. So therefore we are addressing this but Soumitra if you can elaborate on this?

**Soumitra Bhattacharya:**

Actually I have done this work for ACMA for five years as a Chairman of Consumers Affairs Committee and we published a few research books on this issue, it is estimated, nobody knows the numbers, it is estimated that anywhere between 35% up to 50% could be spurious in India in the premarket together. So we said anywhere between 25% to 40% but it could be higher, nobody knows. What was requested from the government based on one flat 50,000 fatal accidents that we have in India which is higher where we also gave a linkage to some significant amount of the numbers, it did not say how much, had a linkage also to part steel and therefore spurious parts to make it a cognizable and nonbailable event, because only when you make it cognizable and nonbailable then you have implementation at the grass roots, today it is not cognizable and it is bailable. Which means then a ray happens, first of all it is a very elaborate process and I do not want to go into details. After the raid when they are brought to the court they can get bail and it has been seen that in India most of the manufacturers and the packers, because there is two types of industries in the spurious parts markets, one manufacturer of spurious goods and second who are packing spurious goods, are coming back again and again. So on one hand Bosch has like many big companies a very organized system of doing raids, we raid to the focus, we try to ensure that there is involvement of all stakeholders including government, but I personally believe in India unless we tackle the root cause of really implementing which partly has been done for the medical industry in terms of drugs where it becomes cognizable and non bailable. So far away from where we should be, the industry is very deep rooted, it is mainly located in the north but has now spread to different parts of India and it is spread very-very deep. So it is a concern, it has been a concern for a long time and the government knows all the details because the government is losing massively because none of this goes in for tax or for collections. So it is a loss for everyone but we have in India unfortunately not been able to fend for ourselves.

**Participant:**

Secondly in terms of the move towards higher tonnage vehicles let say each 40-tonner would be equivalent to 3x to 60-ton or say more what does that do to your economies of scale and profitability in the OEM business because as you move forward it is a conditions become better this migration with further accelerate to an extent and at one end we have the low-end 1-ton kind of vehicle or ACE kind of vehicle so what does it do to your profitability basically, how do you compensate for the loss in volume which will happen?

**Steffen Berns:** It all depends on the overall economy, all this is going to grow and we are assuming economy is going to grow strongly as one part, we are also what we have been seeing in many countries is that while there are large vehicles, more large vehicles for the long distance hauls, there is also an increasing number of smaller vehicles for the final distribution. And for example, the ecommerce business that people are buying all kind of goods via internet and they all have to be delivered, this is a boost for the small commercial vehicle and then you have these huge distribution centers and you have sub-centers and you have the final distribution and overall for us it is not possible currently to estimate how this is going to develop but we see both relatively weak trend to larger vehicles, at the moment this is not really changing as much as we had anticipated earlier which is also partly due to the roads conditions and few other things. On the other side the distribution with smaller vehicles is going to increase and we will have to see what the overall quantity is going to be and I cannot comment on the impact to our economies of scale or bottom-line because we are serving all the different segments.

**Soumitra Bhattacharya:** One comment on the point that you raised, if you take GST for example, we in Bosch are working very intensively on it and we believe this is a great opportunity for improving the entire supply chain and there is a huge amount of inefficiency in the whole system which we sometimes in India do not look at, we do not look at inefficiency and we do not measure it and we do not look and measure the inefficiencies. One small example, you can reduce the number of warehouses but you can improve the one last mile connectivity. Keeping the same distances you can improve the haulage, the usage of vehicles, including you can reduce the inventory and then finally you can still have higher volumes because your whole economy grows, your inefficiency start reducing. So we look at all this as opportunities and we see that this is an opportunity for all business but including for Bosch in terms of turnover and not dipping profitability perhaps even included. But yes, we are focusing on eliminating inefficiency and reducing waste.

**Participant:** Could you tells us about the outlook on the CV segment and especially tractor segment, any hopes of turnaround there are you seeing any changes happening in there in the last year-year and a half.

**Steffen Berns:** Sorry, the first question is easier to answer, I am actually proud that we had been talking about turnaround in the commercial vehicles segment and we have seen this in heavy commercial vehicle now one and half years ago and still improving but still not reached the peak which we had at the beginning of 2012 and I always forecasted that like commercial vehicles this is going to follow in the last three months in commercial vehicles actually has been quite good. And that still for me is not entirely stable because there are many different sectors involved but overall I am optimistic that on this low base it has to grow and there are a lots of goods reasons for it to grow in the market. The second question, you please ask the weather forecast, it has a big impact, then we have the minimum support prices for agricultural products. The rural economy in India, and you must know this much better than I, has not developed too well in the last year and this is partly because of poor monsoon or especially regular weather conditions which we have seen and partly because of the pricing situation and this has impacted on both the tractors as well as

the two wheelers opposite to or in contrast to the heavy commercial vehicles we had a very high base in the last year, and we had a record year compared to this record year the numbers have come down. The long-term definitely is more growth potential but currently the economics for the farmers are not too favorable and then we have to see how the next year is going to be and always the nine thing in India you can say let us wait for monsoon because now after this correction the volumes base is lower, there is some scope, not only that it is stabilizing but then it is growing again, but how much, I cannot say.

**Participant:** No, sir my question was more from that angle, is it giving you any indication of better numbers or is it still like constant growth or flat YoY the kind of schedule that you....

**Steffen Berns:** No, definitely the mood has improved. Also, the reduction in volume has reduced so some even say this has bottomed out now, we have some year-end effect and then we have to see what exactly is going to happen. Overall, I think the mood is cautiously optimistic if you put it further for the tractor market and the rest you ask our customers directly please.

So thanks to all on the telephone, we could not invite you for coffee but wish you a nice day and thanks for your participation and attention. Thank you.

**Moderator:** Thank you very much, sir. Ladies and Gentlemen, on the audio-bridge, the conference call is concluded. You may now disconnect your lines. Thank you.