

# Global light vehicle OE tyres market- forecasts to 2029

April 2015



SAMPLE

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## Introduction

There are many factors shaping the global tyre market. Over the last █ years, the popularity of sport utility vehicles, minivans and crossover vehicles has steadily increased, prompting manufacturers to redesign their tyres. Indeed, the increasing segmentation of the car market has led directly to a more complex tyre market. In response, manufacturers have focused on ways in which to improve tyre dimensions, weight, rolling resistance, noise and fuel efficiency. Social environmental awareness and advances in tyre technology will also play an increasingly important role in the definition of tomorrow's tyres.

Perhaps the most dramatic innovation in tyre technology over the past decade or so has been the development of the run-flat tyre. Run-flat tyres are specially constructed enabling them to be driven on in the event of loss of air pressure. It means the driver can either drive home or to a garage to fix the tyre. Run-flat tyres allow a motorist with a puncture to drive the car up to █ miles at a maximum speed of █ mph before repairing the tyre.

With automakers under pressure to produce more fuel-efficient cars, it is hardly surprising to see them eliminating the spare wheel, thereby shedding up to █ pounds in one stroke. Indeed, a number of automakers now supply a tyre sealant and tyre-inflator pack instead of a full-size or temporary spare wheel (or 'limited use' spare tyre, also known as space-saver or compact spare tyre.) The sealant and compressed air are injected through the tyre valve but the result achieved will depend on the cause of the puncture and how far and fast the flat tyre has been driven on. In other words, tyre inflator kits only work on small punctures over short distances. A major blow-out cannot be repaired using an inflator kit. There are two basic types of sealant, those that are put into the tyre in case of a puncture and those that are put in following a puncture.

# PESTER analysis

## Political

- *The tyres industry is a politically sensitive one because of its size, environmental impact and multinational ownership.*

It is also a mature industry. As a result, we cannot expect annual growth to exceed around █%, though the sheer size of the Big Three allows them to find economies of scale that the smaller players cannot reach.

## Economic

- *The last █ years have seen a dramatic concentration in the number of major players in the market.*

Five of the ten largest companies in 1981 have now been taken over by competitors. This concentration is continuing through in a less dramatic manner, with smaller companies forming alliances or being bought out by larger competitors. As a result, the three largest companies -Bridgestone (based in Japan), Goodyear (based in the US) and Michelin (based in France) - now dominate the world market with a share of just over █%. These are the only truly multinational companies with manufacturing facilities and sales networks in most of the world regions. Other significant competitors include Continental, Cooper Tire, Pirelli, Toyo, Yokohama, Kumho, Hankook and various regional manufacturers.

- *Even though the largest companies have a turnover in excess of US\$█ billion, they remain largely specialist tyre manufacturers.*

Many of the smaller companies also concentrate almost exclusively on tyres. However, the medium-sized companies are diversifying away from tyre manufacturing. For example, Pirelli has always had extensive interests in cable manufacturing while Continental has expanded through acquisitions in a variety of automotive components.

# Companies

## Apollo Tyres

Apollo Tyres manufactures and sells tyres for a number of applications, including passenger cars, SUVs, light trucks, buses, agriculture, industrial, specialty, bicycle and off-road vehicles.

### Brands

Apollo Tyres has three main brands, namely Apollo, Dunlop (████ countries in Africa) and Vredestein. Others are Regal and Kaizen (truck-bus tyres), Maloya (passenger car) DuraTyres (retreaded tyres), DuraTread (retreading material) and Acelere Wheelz (alloy wheels for passenger cars).

In December 2013, Apollo Tyres introduced its Vredestein brand in India, reported *The Economic Times*. The launch of the premium European brand is targeted towards expansion of SUVs and high-end cars family in the Indian market. The company had acquired Vredestein, Amtel's loss-making Holland-based subsidiary, in May 2009 and turnaround it finances successfully. Apollo Tyres boosted annual capacity of Vredestein to █████ m tyres from █████.████ m tyres after its acquisition.

### Investments

Apollo has a number of manufacturing sites in India. Its largest unit is in Limda, in the western Indian state of Gujarat. Two other units are located in the southern Indian rubber-producing state of Kerala. These three together have a combined production of around █████ tonnes a day.

In February 2010, Apollo Tyres began tyre production at its fourth plant in India. Located on the outskirts of Chennai, this green field facility currently produces █████, █████ passenger car tyres and █████, █████ tyres for commercial vehicles each day. At full capacity, this plant produces some █████, █████ passenger car tyres and █████, █████ commercial vehicle tyres daily.

In June 2011, Apollo Tyres opened an office in Dubai. In addition, the company has taken on a warehouse. The Middle East region is now be served by exports out of India, with Dubai as the hub of operations.

# Markets

## Market trends

Although brands have always played a part in tyre marketing, they have assumed much more importance in the last decade with the emergence of global players and the acquisition of a portfolio of existing brands as a result of the takeover of other firms. The increasing segmentation of the car market has led directly to a much more complex segmentation of the tyre market.

There has always been a price differentiation in the tyre industry. With the advent of specialist vehicles such as super sports cars, sports utility vehicles and minivans, this has led to specialist tyres being developed for them, usually at above average prices. This is particularly the case for the OEM market, where the increasing sophistication of vehicle design has led to specific tyres being designed for specific vehicles, but it is also true of the replacement market. There is a tendency for the OEM brand to be specified for replacement tyres for any vehicle, but for some specialist vehicles this becomes almost obligatory, as there are very few makes of tyre designed for some low-volume vehicles.

Tomorrow's tyre market is expected to be led by the ultra high-performance (UHP) tyres which offer enhanced driving control, run-flat tyres which ensure safe driving even in the event of a flat tyre, and ultra fuel efficiency tyres. In particular, with the rapid growth of the hybrid vehicle market, the tyre industry has recently been concentrating on developing fuel-efficient products.

Other factors impacting on tyre design include increased chassis development. In addition, the larger number of car segments have led to an increase in the complexity of the tyre market. Performance no longer just relates to speed alone. The fact that comfort, noise levels, safety and traction have become increasingly important means that so-called performance tyres are often fitted to cars from the lower medium sector of the market.

# Technologies

## Defining the elements

Tyres remain a key technology within chassis engineering. Quite apart from the fact that vehicle grip and handling behaviour ultimately depends entirely on the physics and mechanics of what happens within the four tyre contact patches, the tyres also make significant contributions towards determining ride comfort (since the tyre contributes up to █% of the total spring rate), internal and external vehicle noise, and economy.

An important distinction in car and truck tyres is made between bias tyre construction and radial tyre construction. Radial-ply tyres have long since become the norm for light-duty vehicle use. Bias-ply tyres are now only fitted to motorcycles, bicycles, excavating machines and industrial and agricultural machines. Michelin first introduced steel-belted radial tyres in Europe in 1948. Radial tyres are so named because the ply cords radiate at a █° angle from the wheel rim, and the casing is strengthened by a belt of steel fabric that runs around the circumference of the tyre. In radial tyres, the ply cords are made of nylon, rayon or polyester. The belt over-wrap of a radial tyre uses less tread distortion under load and more sidewall distortion. The advantages of radial tyres include longer tread life, better steering characteristics and less rolling resistance, which increases fuel consumption. On the other hand, radials have a harder riding quality, and since they are technologically more complex than bias-ply tyres, they are about █% more expensive to make when volumes are comparable. Because of their construction, radial tyres require a different suspension system from that used by cars designed for bias-ply tyres.

Tyres are classified according to the respective requirements of various vehicle types and sizes, and operating conditions. The essential data – tyre dimensions, load ratings, specified inflation pressures and authorised speeds – are standardised in the interests of interchangeability in the following seven tyre categories:

- engine-driven, two-wheeled vehicles – motorcycles and motor scooters;
- passenger cars;
- light-duty trucks – including delivery trucks;
- commercial vehicles – including multi-purpose vehicles;
- excavating machines – transport vehicles, loaders and graders;
- industrial trucks – including solid rubber tyres;
- agricultural vehicles and machinery – tractors, machines, trailers and equipment.

# Forecasts

This section sets out our estimates and forecasts of tyres fitted to newly-assembled passenger cars and light vehicles across [redacted] of the world's largest light vehicle markets - which collectively account for more than [redacted] percent of world light vehicle production. Our forecasts range is from 2008 through to 2019 with spot forecasts for 2024 and 2029.

Our forecasts are not extrapolative but dependent on the underlying drivers of supply and demand. Each forecast is based on vehicle data prepared by our partner, LMC Automotive. The vehicle data (passenger cars and light commercial vehicles) includes:

- North America - US, Canada and Mexico;
- Mercosur - Brazil and Argentina;
- Western Europe - Germany, Italy, France, UK, Spain, Portugal, Netherlands, Belgium, Sweden, Austria, Finland and Morocco;
- Central Europe - Turkey, Bulgaria, Czech Republic, Poland, Slovakia, Hungary, Romania, Serbia and Slovenia;
- Russia;
- Japan;
- China;
- India;
- Korea;
- Thailand;
- Other Asia - Indonesia, Malaysia, Taiwan and Philippines;
- Iran;
- South Africa;
- Australia.

These forecasts are updated quarterly or as and when major changes require assumptions to be amended. Full revision history for all of our forecast pages within this section allow you to see what has changed and when.

## Tyres

### Run-flat tyres

Perhaps the most dramatic innovation in tyre technology over the past decade or so has been the development of the run-flat tyre. Run-flat tyres are specially constructed enabling them to be driven on in the event of loss of air pressure. It means the driver can either drive home or to a garage to fix the tyre. Run-flat tyres allow a motorist with a puncture to drive up to [redacted] miles at a maximum speed of [redacted] mph before repairing the tyre.

# Glossary

**Aramid:** A synthetic fibre that is, per weight, stronger than steel. Used in tyre construction, it provides good high tensile strength to weight.

**Aspect ratio:** An expression representing the height of the sidewall of a tyre in terms of a percentage of tyre's width.

**Carcass:** That portion of a tyre that is the foundation for the tread, belts, bead and sidewall.

**Casing:** The structure of tyre cords locked around wire beads.

**Chafers:** A finishing strip of calendered fabric used to protect the tyre's bead area from the rim.

**Compound:** General term referring to the chemical formula for the tread material.

**Filler:** The material used to fill the area above the bead between the outer and inner portion of the sidewall. It is also used in enlarged form to stiffen the lower sidewall of a tyre.

**Grooves:** Circumferential channels between the tread ribs of a tyre.

**H-speed or H-performance rated:** A speed category for tyres with a maximum speed capability of  mph.

**High-performance tyre:** Those tyres with speed ratings of S or greater and aspect ratios of  or less.

**Light truck tyres:** Tyres designed for off-the-road and on/off-the-road use on sport/utility, small commercial and recreational vehicles.

**Load rating:** A method of rating a tyre's load-carrying capacity (denoted by letters such as B, C, D, etc) with respect to its ply rating.

**Low-profile:** A term describing a tyre with a low relative aspect ratio or series classification.

**Passenger car tyre:** Vehicle tyres featuring aspect ratios of  or greater, using a taller profile for increased ride comfort.

**Ply:** A layer of rubber-coated fabric or wire making up the tyre casing.

# Archive

## Market investments

### Europe

In September 2008, Continental completed its acquisition of the Finnish spike manufacturer, TIKKA Spikes Oy. TIKKA Spikes Oy operated a plant in Tikkakoski, Finland and a sales office in Espoo as well as a plant in St Petersburg, Russia, through its Russian associated company OOO TIKKA.

In 2007, TIKKA Spikes Oy employed █ people and generated sales of some EUR █ m. However, Dunn & Bradstreet (D&B) reported the company had income of EUR █ m in FY ending █ December 2009 with █ employees. More recently D&B reported FY2010 income at EUR █ m with profits before tax at EUR █ K, with the number of employees down to █.

### Russia

**Toyo Tire & Rubber** established Toyo Tire Rus LLC, its Russian tyre sales subsidiary with Mitsubishi Corp in 2008. Toyo Tire & Rubber has a █ % stake in the new company, with Mitsubishi Corp owning the remaining █ %.

In August 2009, **Yokohama Rubber** entered into a joint venture with Itochu Corporation to manufacture and sell tyres in Russia. The venture, known as Yokohama rpz LLC, is █ %-owned by Yokohama Rubber, with the remaining █ % held by Itochu.

In December 2009, **Pirelli** entered into a █-5█ joint venture with Russian Technologies State Corporation to produce tyres and steel cord in the Russian region of Samara. Russian Technologies State Corp is a state-owned company set up by the Russian government. The stated mission of Russian Technologies is to assist Russian design and manufacturing organisations to develop, produce and export high-technology industrial products in domestic and international markets, and attract corporate investments in various industrial sectors.

# Market volumes of tyres fitted to newly-assembled passenger cars and light vehicles, 2009-2024, ('000s units)

Market	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2024	2025
North America	1,100	1,120	1,140	1,160	1,180	1,200	1,220	1,240	1,260	1,280	1,300	1,320	1,340
Mercosur	1,000	1,020	1,040	1,060	1,080	1,100	1,120	1,140	1,160	1,180	1,200	1,220	1,240
Western Europe	1,000	1,020	1,040	1,060	1,080	1,100	1,120	1,140	1,160	1,180	1,200	1,220	1,240
Central Europe	800	820	840	860	880	900	920	940	960	980	1,000	1,020	1,040
Russia	600	620	640	660	680	700	720	740	760	780	800	820	840
Japan	500	520	540	560	580	600	620	640	660	680	700	720	740
China	400	420	440	460	480	500	520	540	560	580	600	620	640
India	300	320	340	360	380	400	420	440	460	480	500	520	540
Korea	250	270	290	310	330	350	370	390	410	430	450	470	490
Thailand	200	220	240	260	280	300	320	340	360	380	400	420	440
Other Asia	150	170	190	210	230	250	270	290	310	330	350	370	390
Iran	100	120	140	160	180	200	220	240	260	280	300	320	340
South Africa	80	90	100	110	120	130	140	150	160	170	180	190	200
Australia	60	70	80	90	100	110	120	130	140	150	160	170	180
Total markets	4,500	4,600	4,700	4,800	4,900	5,000	5,100	5,200	5,300	5,400	5,500	5,600	5,700

Source: just-auto, LMC Automotive and industry sources

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