

**ROYALTY  
RANGE**

# Benchmarking Study Report

Automotive industry

Further to our agreement we provide you with the benchmarking study report summarising the results of the benchmarking search performed. RoyaltyRange has been requested to conduct Comparable Uncontrolled Price (CUP) analysis to determine an arm's length range of royalty rates for inventions, industrial secret, know-how, technical and engineering data of automotive components.

The search and the transfer pricing benchmarking analysis were conducted using the RoyaltyRange proprietary database only and therefore only represent the data available in the RoyaltyRange database. RoyaltyRange benchmarking study does not follow any specific requirements under the legislation of any specific country and this is neither legal nor tax advice. This study is not the analysis of the arm's length nature of any specific agreement. Please check if the applied criteria, methodology, calculations, etc. are in line with your local country legislation. In order to arrive at any additional conclusions, further analysis is needed and our draft study is to be treated just as a representation of the data available in our database. Regarding the information used to prepare the benchmarking study, RoyaltyRange shall be treated as a provider of information obtained from public sources and we cannot guarantee the accuracy and consistency of such information. All information is extracted from public sources and RoyaltyRange does not independently validate such information.

The data reports of RoyaltyRange are an indication and interpretation of the terms of publicly available agreements, disclosures, filings and other documents, and the client shall use the data reports in conjunction with these agreements, disclosures, filings and other documents. Please also note that some parts of the information are created through a subjective analysis and RoyaltyRange gives no warranty for the accuracy of such information. The client should use the agreements and other downloadable documents using the links in the data reports or provided with the reports as primary sources of information. The usage of the data is the sole responsibility of the client. Any further modifications by the client should not be presented as RoyaltyRange deliverable.

The database is constantly updated with new information, including the new or more accurate information on the existing data reports. Please note that we do not track any data reports used by our customers and thus we do not provide any updates to the data, if any.

The detailed approach and the draft results of the search are provided in the following pages.

Should you have any questions or comments, please do not hesitate to contact us.

Kind regards,

RoyaltyRange

# Executive Summary

- RoyaltyRange has been requested to conduct CUP analysis to determine an arm's length range of royalty rates for inventions, industrial secret, know-how, technical and engineering data of automotive components.
- The search study was conducted using the RoyaltyRange proprietary database.

## Results

The search resulted in 17 potentially comparable agreements associated with the licensing of intellectual property in the field under review.

Based on the royalty rates used in the analysis, the royalty rates for third-party licence agreements range from 2,00% to 10,00% with an inter-quartile arm's length royalty rate range of 3,00% to 6,00% and median of 5,00%.

Arm's length range of royalty rates	Median	Full range of royalty rates
3,00% - 6,00%	5,00%	2,00% - 10,00%

# OECD Regulatory Framework

## Transfer Pricing Regulatory Framework and Arm's Length Principle

The arm's length principle and the related OECD Guidelines on transfer pricing form the internationally accepted standard for testing the appropriateness of intercompany transactions. The arm's length principle is generally applied by 35 member countries of OECD and many non-member countries as well.

The arm's length principle is incorporated in Article 9 of OECD Model Convention on Income and on Capital, which forms the basis of the extensive network of bilateral tax treaties between countries.

## CUP Method

The OECD Guidelines on transfer pricing impose a requirement that the most appropriate method be applied under the applicable facts and circumstances.

The CUP method compares the price charged for property or services in a controlled transaction to the price charged for property or services in a comparable uncontrolled transaction.

## Comparability of Transactions

Application of the arm's length principle is based upon a comparison of the economically relevant characteristics of the tested transaction with the economically relevant characteristics of transactions between independent companies. The tested controlled transaction must be sufficiently comparable to an external uncontrolled transaction.

In the course of application of the CUP method, an external uncontrolled transaction should comply with the following OECD factors for comparability:

- Characteristics of property or services;
- Functional analysis;
- Contractual terms;
- Economic circumstances;
- Business strategies.

# Search Process I

## Database Used

The search was performed using the RoyaltyRange proprietary database. The RoyaltyRange database contains manually gathered and analysed data. Each report is supplemented with original unredacted agreements, as well as filings and other types of documents which the data is gathered from. For the purposes of this study, the reference to agreements also means arrangements, public filings, annual reports, 10K forms, etc.

## Search Process

The search process consists of the following stages:

- **Quantitative screening.** Search process yields a list of potentially comparable reports.
- **Qualitative screening.** The sample is manually reviewed and the final set of reports is selected.
- **Financial analysis.** The range of royalty rates for third-party licensing agreements, an inter-quartile arm's length royalty rate range and median are calculated.

## Search Strategy

The general search strategy was provided by the client in the request. The search process is described in the coming slides.

# Search Process II

The following search criteria were applied in the search process:

## Industry Classification Codes

The Nomenclature statistique des activités économiques dans la Communauté européenne, commonly referred to as **NACE**, is a statistical classification of economic activity in the European Community. The following NACE rev. 2 codes were used in the search process:

45.31 - Wholesale trade of motor vehicle parts and accessories.

## Type of Intellectual Property or Agreement

The agreements were selected if the licensed property was know-how, technology and/or patent.

# Search Process III

## Keywords

The following keywords were applied in the search process:

Automotive, Vehicle, Motor, Auto.

## Royalty Base

The following royalty base was applied in the search process:

Net sale, sale, gross sale, revenue or similar.

# Quantitative Screening

The search process yielded a list of 73 potentially comparable Primary reports which fitted the specifications of the search strategy applied.

The Primary reports contain description of object, information on Licensor's and Licensee's activities, territory, licensing period, exclusivity, restrictions of the use, rights to enhancements, royalty calculation base and characterisation of the transaction involving intangibles.

The Primary reports exclude information on royalty rates, other compensations details, as well as some other information.

The full list of the Primary reports is presented in the Appendix, 'Quantitative Screening' sheet.

# Qualitative Screening I

The qualitative screening involves a two step process.

## First Step

The first step involved a review of the Primary reports containing a description of the terms of the licensing agreements.

The main reasons for rejecting Primary reports were the following:

- Non-comparable types of products, services or industries;
- Non-comparable characterisation of the transaction involving intangibles;
- Non-comparable royalty calculation base;
- Non-comparable type of intangible.

The list of the rejected reports and the reasons for which these reports were rejected are provided in the Appendix, 'Quantitative Screening' sheet.

As a result of this stage a total of 22 Primary reports were selected as potentially comparable for further analyses. The list of 22 Final reports selected as potentially comparable is provided in the Appendix, 'Qualitative Screening' sheet.

# Qualitative Screening II

## Second Step

The second step involved downloading the 22 Final reports and reviewing the full data on the earlier selected potentially comparable Primary reports.

The main reasons for rejection of potentially comparable Final reports were the following:

- Agreements involved undisclosed and/or complex future arrangement and/or royalties payable by licensor to licensee;
- Agreements involved significant or undisclosed value equity compensation.

A total of 17 agreements were identified as comparable.

The list of the Final reports is provided in the Appendix, 'Qualitative Screening' sheet. The list of the rejected Final reports and the reasons for which these reports were rejected are also provided in the Appendix, 'Qualitative Screening' sheet.

# Royalty Rates Used in the Analysis

For the purposes of the analysis, the royalty rates were used in the calculations in accordance with the following conditions:

- Where one agreement contains several royalty values for different products or services, each value is considered as a separate rate to be used in the calculation;
- Where one agreement contains several royalty values for similar products or services which vary depending on volumes, time periods or other conditions, an average value is calculated and is used in the calculation.

Example

# Overview of the Selected Agreements I

The following table provides an overview of the selected agreements.

Unique Code	Licensor	Licensee	Description of Object	Geographical Scope	Date of Agreement	Base	Royalty Rate	Royalty Rate Used in the Analysis
RR20130109T01007	Research Frontiers Incorporated	Pilkington Group Limited	License under licensed technology, know-how and patent rights to make, lease, sell or otherwise dispose light valve transportation vehicle window shading product incorporating a light valve (a variable light transmission device).	Global grant	13/12/2007	Net selling price	10,00 %	10,00 %
RR20130110T01004	Research Frontiers Incorporated	Kerros Limited	License under licensed technology, know-how and patent rights to make, lease, sell or otherwise dispose light valve transportation vehicle window shading product incorporating a light valve (a variable light transmission device) for use solely as a window.	Global grant except North and South Korea	30/05/2003	Net selling price	10,00 % 5,00 %	10,00 % 5,00 %
RR20130909T07002	Research Frontiers Incorporated	BOS GmbH & Co. KG	License under licensor's know-how and patents to make, lease, sell or otherwise dispose of a variable light transmission device (valve) as a sunshade device attached to a window, windshield or other interior part of a military or non-military transportation vehicle to protect from sunlight or glare.	Global grant	04/02/2002	Net selling price	5,00 %	5,00 %
RR20130807T09001	DynaCERT Inc.	Unspecified	License to exploit all new inventions related to fuel systems and diesel engines (specifically HydraGen™ - hydrogen generator aftermarket retrofit product for diesel fuelled engines).	Global grant	01/01/2013	The sales of product	6,00 %	6,00 %
RR20130902T09003	Research Frontiers Incorporated	GKN Aerospace Transparency Systems Inc.	License under licensor's technology, know-how and patents to make, lease, sell or otherwise dispose of the light transmission device only for the use as a bullet-resistant or otherwise armored window (including sunroofs, windshields, and side and rear window panes) integrally incorporated in a military or civilian transportation vehicle	Global grant	21/02/2008	Net selling price	10,00 %	10,00 %
RR20130902T09004	Research Frontiers Incorporated	Asahi Glass CO.	License under licensor's technology, know-how and patents to make, lease, sell or otherwise dispose of the light transmission device only for the use as a window (including sunroofs, windshields, and side and rear window pane) integrally incorporated in a transportation vehicle of a type not primarily designed or primarily intended for military use.	Global grant	11/04/2006	Net selling price	10,00 %	10,00 %

# Overview of the Selected Agreements II

Unique Code	Licensor	Licensee	Description of Object	Geographical Scope	Date of Agreement	Base	Royalty Rate	Royalty Rate Used in the Analysis
RR20140206T05001	Namyang Industrial CO., Ltd.	Jingzhou Heng Long Automotive Parts CO., Ltd.	License under licensor's know-how, technology and other technical information to assemble, manufacture and sell licensed products (lower tilt, collapsible steering column and universal joint assembly) necessary for electronic-controlled power steering systems.	China	21/07/2003	Sale price	3,00 %	3,00 %
RR20140623T05001	Korea Delphi Automotive Systems Cooperation	Jingzhou Henglong Automotive Parts CO., Ltd.	License to use licensor's technology embodied in technical documentation (drawings, specifications, standards, etc.) to manufacture and/or sell licensed manual gear assembly for incorporation into motor vehicle known as Matiz.	China	13/01/2005	Selling price	3,00 %	3,00 %
RR20140807T05001	Key Safety Systems Inc.	Jinheng Automotive Safety System Co., Ltd	License under technology comprised of know-how relating to certain processes, techniques, equipment and product specifications, methods and constructions to manufacture and sell licensed component, known as SRS-40, which is a part of certain mechanical air bag system.	PRC	01/11/2000	Net sale	3,00 % 2,50 % 1,00 %	2,17 %
RR20140909T05001	Rieter Automotive (International) AG	Uniproducts (India) Limited	License to use licensor's acoustic and thermal investigation/service technologies and know-how in connection with manufacture and sale of heat shields for automobiles.	India	21/12/1999	Net sale value	3,00 % 4,00 %	3,00 % 4,00 %
RR20130412T04001	Turbodyne Systems Inc.	Ishikawajima-Harima Heavy Industries Co., Ltd.	License to use a number of licensor patents in the field of electrically assisted turbochargers; Right to use the licensor's trademark Dynacharger(TM).	Asia, Europe	05/09/2002	Selling price	3,00 % 1,00 %	2,00 %
RR20130712T02003	Let's Go Aero, Inc.	Cequent Towing Products, Inc.	License for licensor's patents and other intellectual property to make, manufacture, use, import and sell the entire line of hitch-mounted cargo carriers, silent hitch pin, and "Pixie" bicycle carrier under licensor's trademarks, trade names and other brands.	Global grant	02/01/2008	Net sale price	7,00 % 5,00 %	6,00 %

# Overview of the Selected Agreements III

Unique Code	Licensor	Licensee	Description of Object	Geographical Scope	Date of Agreement	Base	Royalty Rate	Royalty Rate Used in the Analysis
RR20140410T06001	Environmental Recycling Technologies plc	LBO Capital Inc	License under know-how and patent rights to make, use sell and otherwise dispose of any automotive product or component which features as part of its manufacture the essential encapsulation of a magnesium part.	Global grant	01/11/2008	Chargeable transaction	3,00 %	3,00 %
RR20130509T04001	Rand Energy Group, Inc., Reg Technologies, Inc.	Radian Incorporated	License under licensor's patents and know-how to manufacture the Rand Cam TM diesel engines for application in unmanned autonomous vehicles over 10 horsepower maximum engine power.	Global grant	24/04/2002	Sale	6,00 %	6,00 %
RR20140108T03001	Environmental Recycling Technologies plc	Global Tech International, Inc	License under the patents and know-how to make any automotive product or component which does not feature as part of its manufacture the essential encapsulation of a magnesium part.	North America	23/06/2008	Net selling price	3,00 %	3,00 %
RR20130421T04021	New Generation Motors Corporation	Bajaj Auto, Ltd.	License under licensor patents and related know-how to manufacture (only in India) licensed products (electric motor system, phase motor controllers, brushless PM motor) for use in the licensee`s three/two/four wheeler and other licensee`s products; License to use licenced products for incorporation into the licensee`s three/two/four wheeler and other products.	Global grant / India	17/12/2005	Sale revenue	4,00 %	4,00 %
RR20140523T05003	Energenx, Inc.	GTG Corp	License under patent, trade secrets and know-how to use licensor's technology and trademarks relating to a battery charging system, known as the potential battery charger, for charging battery operated vehicles.	The United States, Canada and Mexico	01/12/2004	Gross selling price	5,00 %	5,00 %

# Calculating the arm's length royalty rate range

The OECD Guidelines on transfer pricing indicate that statistical tools that take account of central tendency to narrow the range (e.g. the interquartile range or other percentiles) might help to enhance the reliability of the analysis. It also states that it may be appropriate to use measures of central tendency in order to minimise the risk of error due to unknown or unquantifiable remaining comparability defects.

The following statistical tools were used for the purposes of the analysis:

<b>Quartile</b>	There are three variate values which separate the total frequency of a distribution into four equal parts. The central value is called the median and the other two the <b>upper</b> and <b>lower quartiles</b> respectively.
<b>Interquartile range</b>	The variate distance between the upper and lower quartiles. This range contains one half of the total frequency and provides a simple measure of dispersion which is useful in descriptive statistics.
<b>Median</b>	The median is that value of the variate which divides the total frequency into two halves.

\*Source: <http://stats.oecd.org/glossary/>

A Dictionary of Statistical Terms, 5th edition, prepared for the International Statistical Institute by F.H.C. Marriott. Published for the International Statistical Institute by Longman Scientific and Technical.

Taking into consideration the aforementioned, the interquartile range and median could be considered as falling within an arm's length royalty rate range.

# Royalty Rate Range

The following table provides the results of the analysis.

Range	Royalty rate
Maximum	10,00 %
Upper quartile	6,00 %
Median	5,00 %
Lower quartile	3,00 %
Minimum	2,00 %

Based on the royalty rates used in the analysis, the royalty rates for third-party licensing agreements range from 2,00% to 10,00%, with an inter-quartile arm's length royalty rate range of 3,00% to 6,00% and median of 5,00%.

# Appendix

You may find the list of primary and final reports under the 'Quantitative screening' and 'Qualitative screening' tabs (at the lower left corner of the Excel file) accordingly.

## **'Quantitative Screening' sheet**

The list of 73 Primary reports (with indication of the rejected reports and the reasons for which these reports were rejected)

## **'Qualitative Screening' sheet**

The list of 22 Final reports (with indication of the rejected reports and the reasons for which these reports were rejected)