

17th Annual International Intellectual Property Conclave of MarkPatent.ORG

February 10th & 11th, 2024; Ahmedabad, Gujarat, India



'IP: Foundation for Economic Growth'

Christian Günther

Founder and CEO
Persephone GmbH

PERSEPHONE

Table of Contents

1. Introduction
2. Overview of IPR types in India
3. Patent Rights v Antitrust Law (U.S.)
4. Categories of Intangible Assets following IFRS3
5. Different Industries – Different layers of complexity
6. Glivec™
7. Intangible Assets: R&D Accounting/Taxation (OECD)
8. Knowledge Based Economy
9. Closing Remarks

1.Introduction

- Intellectual property: creations of the human mind
- IPR are legal rights resulting from intellectual activity in the industrial, scientific, literary and artistic fields
- Protection of IPR:
 - statutory expression to the moral and economic rights of the creators, inventors, etc.
 - promote creativity, innovation, dissemination and application of the results, which lead to economic and social development

Source: WIPO- World Intellectual Property Organization, Vermandele https://www.wipo.int/edocs/mdocs/aspac/en/wipo_ipr_pnh_11/wipo_ipr_pnh_11_ref_t4.pdf

1.Introduction

- Why are IP Rights relevant?
 - Important factor in knowledge based economies
 - Incentive for domestic innovation, business activity and creativity
 - Attracts high-value foreign direct investments (FDI)
 - Creates employment and generates tax revenue
 - Promotes high value exports

Source: WIPO- World Intellectual Property Organization, Vermandele https://www.wipo.int/edocs/mdocs/aspac/en/wipo_ipr_pnh_11/wipo_ipr_pnh_11_ref_t4.pdf

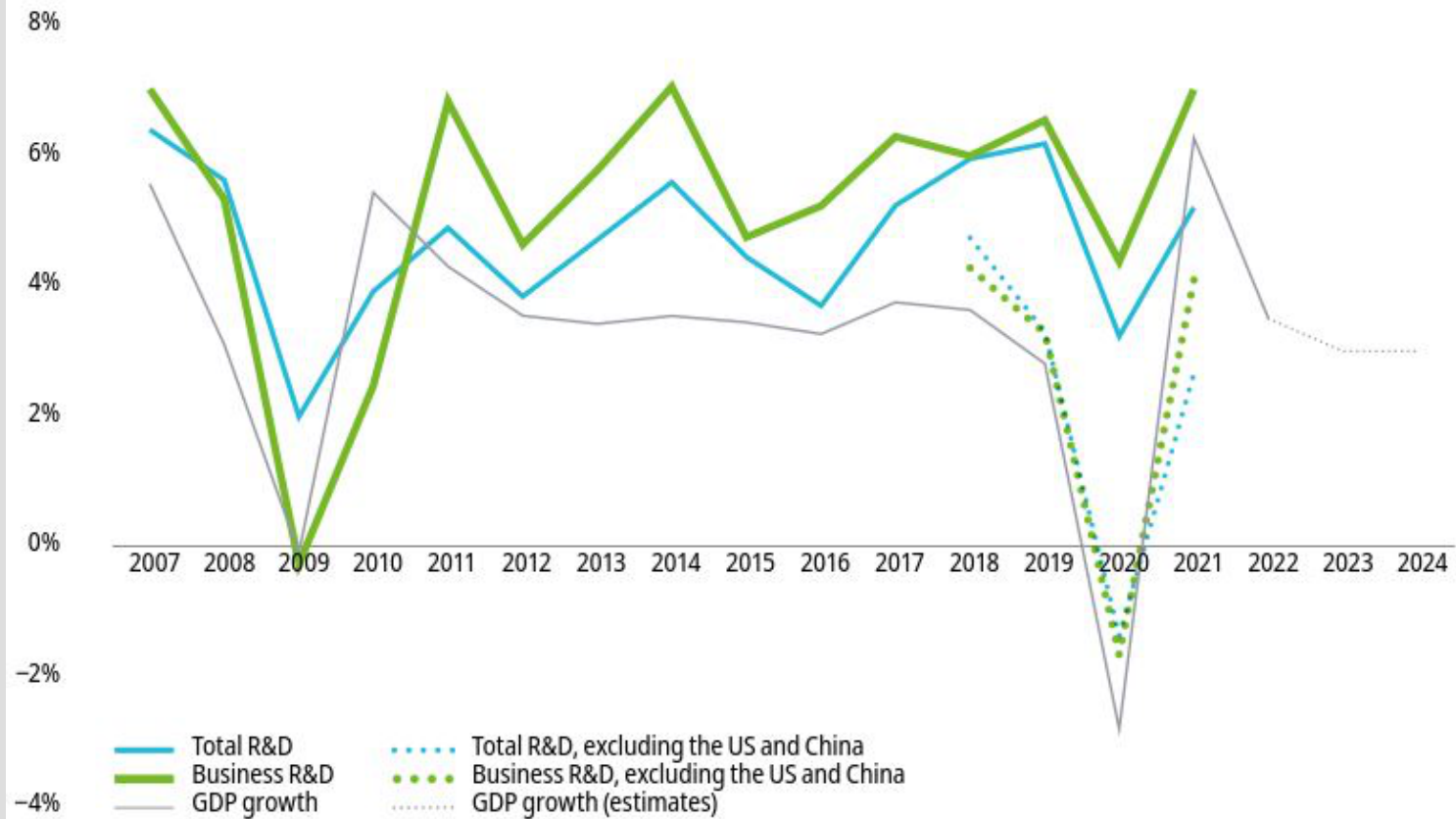
1.Introduction

- Registered rights: Trademarks, Industrial Designs, Patents, Plant Breeders' Rights, Lay-out Design of Integrated Circuits, Geographical Indications;
- Unregistered rights: Copyrights, Related Rights;
- (Country-)Specific rights: Commercial Names and Designations, Unfair competition, Undisclosed Information
- Can be secured by filing applications for different types of intellectual property, and have to be filed separately and within each country, where protection is sought
- Intellectual Property Rights give creator or inventor exclusive protection and commercialization rights
- IPR are categorized and recognized around the globe (WTO/TRIPS Trade Related Aspects of Intellectual Property Right), with differences both in definition and registration requirements in each country
- Time periods of protection, requirements/difficulty to secure and costs/fees vary within each country and domestic IP Offices
- IPR are key for ongoing commercialization, securing business operations and obtaining investments
- In a knowledge based economy, IPR are sometimes the sole or most important differentiator between businesses in a hypercompetitive business environment

Source: WIPO- World Intellectual Property Organization, Vermandele https://www.wipo.int/edocs/mdocs/aspac/en/wipo_ipr_pnh_11/wipo_ipr_pnh_11_ref_t4.pdf

1. Introduction

Figure 1 GDP growth and total and business R&D growth rates, 2007-2024



Source: WIPO estimates, based on the UNESCO Institute for Statistics database, Organisation for Economic Co-operation and Development (OECD) Main Science and Technology Indicators (March 2022), Eurostat, Ibero-American and Inter-American Network of Science and Technology Indicators (RICYT), China Statistical Yearbook 2022, and the International Monetary Fund's World Economic Outlook Update, July 2023.

Source: WIPO Global Innovation Index 2023 <https://www.wipo.int/edocs/pubdocs/en/wipo-pub-2000-2023-en-main-report-global-innovation-index-2023-16th-edition.pdf>

1.Introduction

WIPO IP Statistics Data Center

[Back](#)

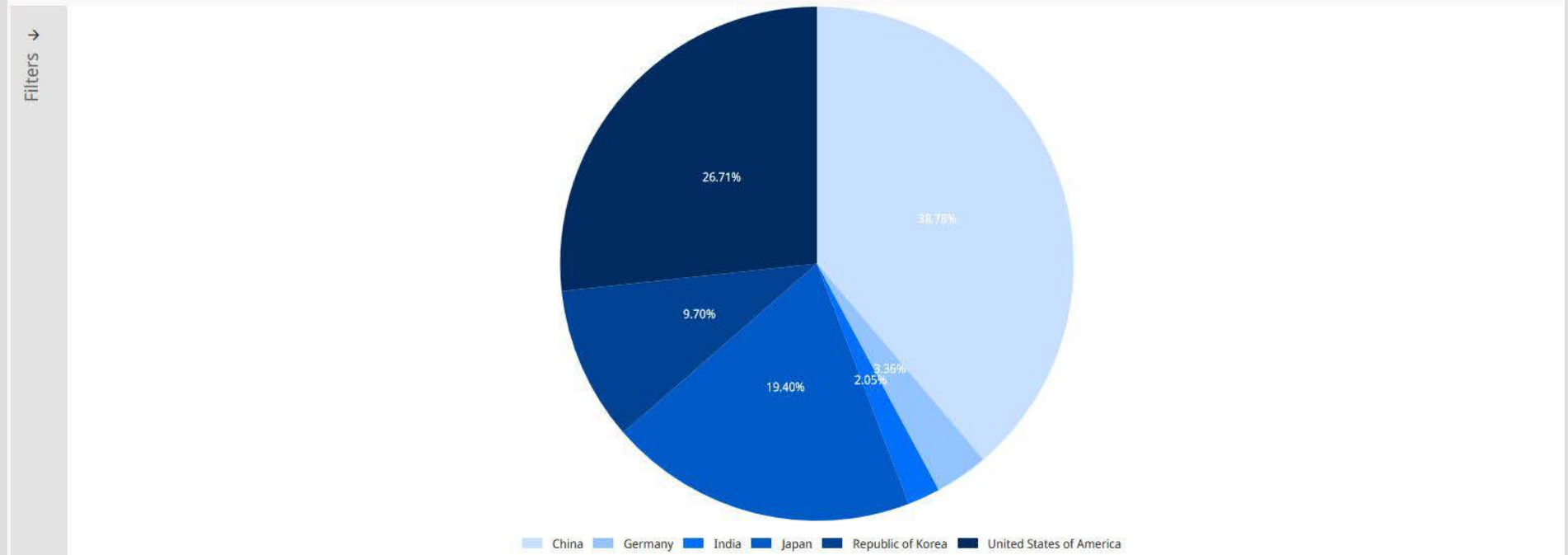
[Modify search](#)

Source: WIPO statistics database. Last updated: December 2023

Intellectual property right : Patent
Year range : 2000 - 2022

Reporting type : Total count by filing office
Indicator : 1 - Total patent applications (direct and PCT national phase entries)

[Table](#) | [Line chart](#) | [Bar chart](#) | [Stacked chart](#) | [Pie chart](#) | [Download CSV](#)

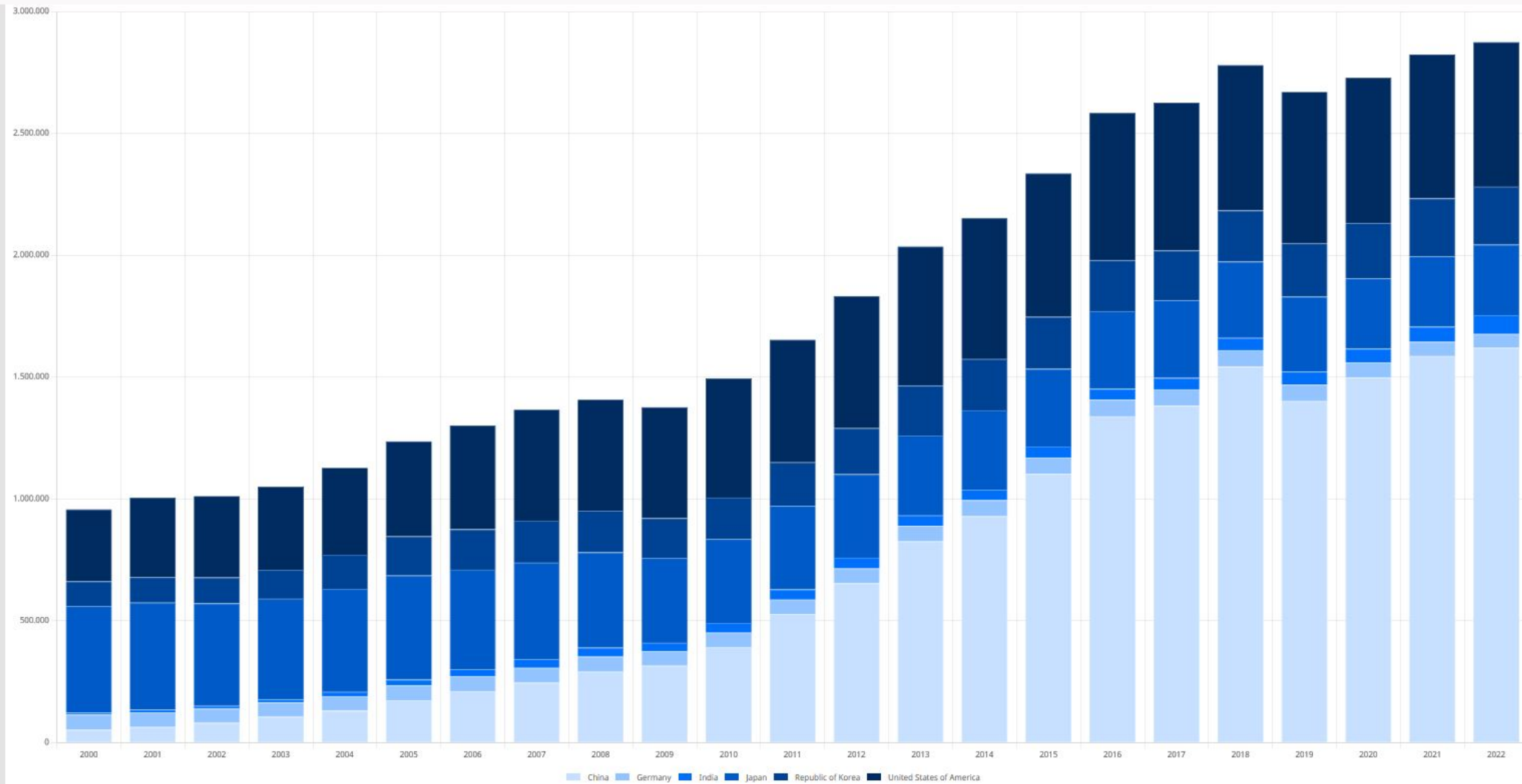


Source: WIPO statistics database. Last updated: December 2023

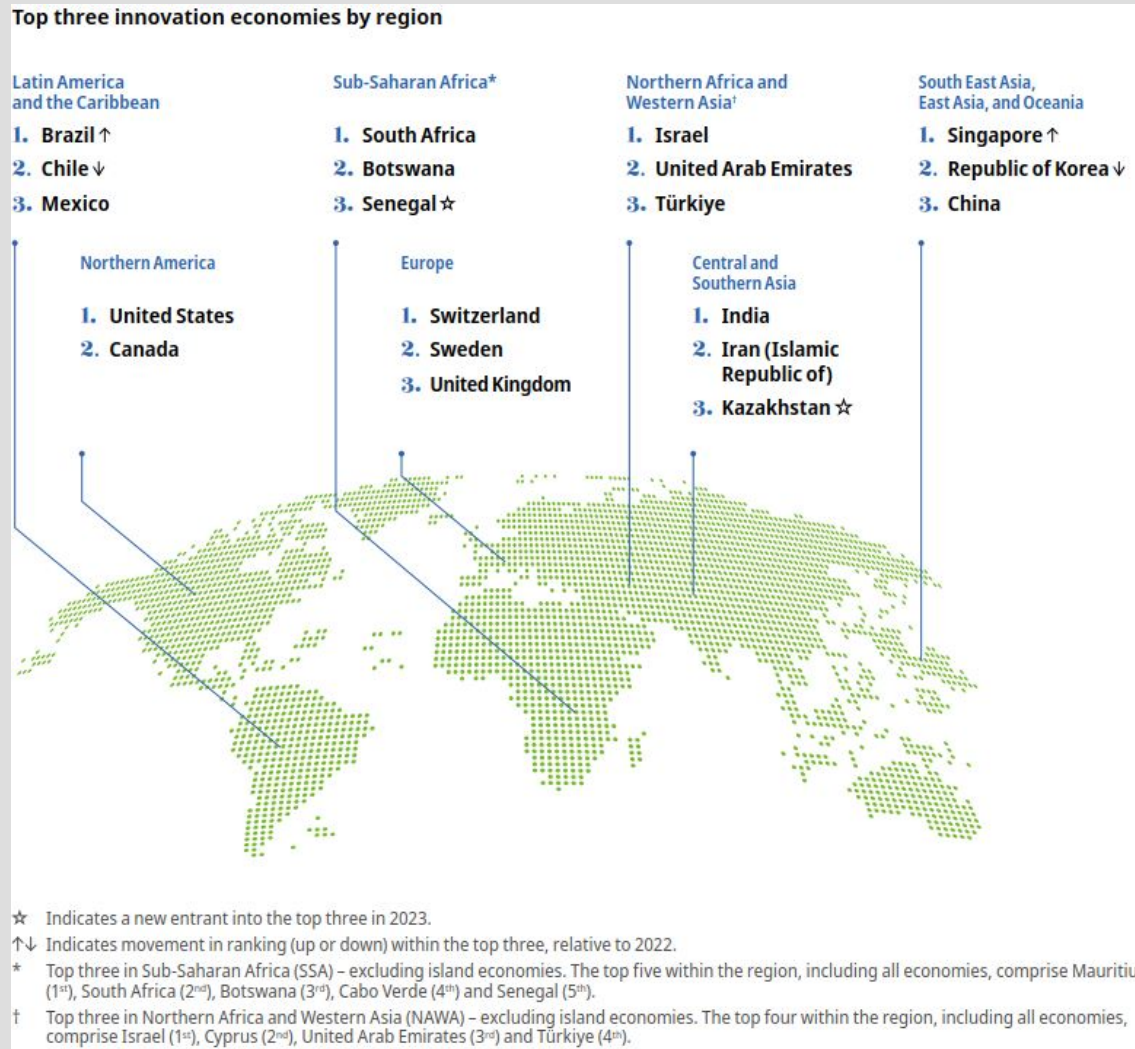
Intellectual property right : Patent
Year range : 2000 - 2022

Reporting type : Total count by filing office
Indicator : 1 - Total patent applications (direct and PCT national phase entries)

[Table](#) | [Line chart](#) | [Bar chart](#) | [Stacked chart](#) | [Pie chart](#) | [Download CSV](#)



WIPO Global Innovation Index 2023



Source: WIPO Global Innovation Index 2023 <https://www.wipo.int/edocs/pubdocs/en/wipo-pub-2000-2023-en-main-report-global-innovation-index-2023-16th-edition.pdf>

WIPO Global Innovation Index 2023

Top three innovation economies by income group

High-income

1. Switzerland
2. Sweden ↑
3. United States ↓

Upper middle-income

1. China
2. Malaysia ↑
3. Bulgaria ↓

Lower middle-income

1. India
2. Viet Nam
3. Ukraine ☆

Low-income

1. Rwanda
2. Madagascar
3. Togo ☆

Source: Global Innovation Index Database, WIPO, 2023.

Notes: World Bank Income Group Classification (July 2022). Year-on-year changes in GII rank are influenced by performance and methodological considerations. Some economy data are incomplete (see Appendix I).

2. Overview of IPR types in India

- **Copyrights:** The Copyright Act, 1957 (“Copyright Act”)
- **Trademarks:** The Trade Marks Act, 1999 (“Trade Marks Act”)
- **Patents:** The Patents Act, 1970 (“Patents Act”)
- **Trade Secrets:** No Trade Secrets per se in India: Trade Secret law in India is mostly governed via common law such as: Section 27 of the Indian Contract Act (1872)
- **Industrial Design:** The Design Act, 2000 (“Design Act”)
- **Geographical Indication:** The Geographical Indications of Goods (Registration and Protection) Act, 1999 (“GI Act”)
- The Protection of **Plant Varieties and Farmer’s Rights** Act, 2001 (“Plant Varieties Act”)
- The **Semiconductor Integrated Circuits Layout-Design** Act, 2000 (“SICLD Act”)

Source: Ahlawata & Associates, 2022 <https://www.ahlawatassociates.com/blog/types-of-intellectual-property-rights-in-india/>

2. Overview of IPR types in India

- **Copyrights:** The Copyright Act, 1957 (“Copyright Act”)

Protect the expression of an idea and not the idea itself;

Under section 13 of the Copyright Act, protection can be sought for 'original literary, dramatic, musical and artistic works', which can also be computer programmes;

Copyrights are 'exclusive rights' that are granted to carry out or authorize activities associated with copyrighted work; i.e. the owner or a person authorized by the owner is allowed to perform, make translation(s) or produce variations or adaptations of the copyrighted work;

Under section 17 of the Copyright Act, the author of the original work (for which copyright protection has been secured) shall be the first owner of the work; in addition the owner has the right to license the copyright of the work by a written agreement;

Under the Berne Convention the duration of the term for copyright protection shall be the life of the author plus at least 50 years; in India: author's lifetime plus 60 years; in the European Union and the U.S.: author's life plus 70 years;

Various differences in duration and definitions of copyrighted work country-by-country!

Source: Copyright Office, Gov. of India, <https://copyright.gov.in/documents/copyrightrules1957.pdf>



2. Overview of IPR types in India



- **Trademarks:** The Trade Marks Act, 1999 (“Trade Marks Act”)
 - Under section 2 (zb) a 'trade mark' is 'a mark capable of being represented graphically and which is capable of distinguishing the goods or services of one person from those of others and may include shape of goods, their packaging and combination of colours'
 - > provides protection for symbols, brand names, sounds, shapes, words et cetera as relating to a good or service
 - Don't need to be filed, when marks are in use, entirely unique and can be satisfactorily proven to have 'acquired distinctiveness' (but can be filed for intended future use also)

Trade Marks Act defines absolute grounds of refusal of registration:

(a) the mark not having a distinctive character; (b) a mark being deceptive and confusing to the public; (c) if a mark is hurtful to religious sentiments; (d) the mark is offensive, scandalous, or obscure, etc. In addition to the absolute grounds of refusal, the statute also provides for relative grounds of refusal of registration (i.e. similarity with pre-existing marks).

- India is signatory to the Madrid Protocol under which a trademark may be applied for and registered internationally
- Term for initially 10 years, which can be renewed for successive 10 years in perpetuity by filing of renewal applications

Source: The Trade Marks Act, India Code <https://www.indiacode.nic.in/bitstream/123456789/1993/1/A1999-47.pdf>

2. Overview of IPR types in India

- **Patents:** The Patents Act, 1970 (“Patents Act”)

A patent is a statutory right granted by the State, which protects a new invention, the rights of the inventor and excludes others from using the registered patent without authorization or license, namely:

- ◆ patent for a product: right to prevent others from using, selling, making or importing, etc. the product without prior authorization
- ◆ patent for a process: right to prevent others from using, selling, offering, et cetera or a product obtained from that process without prior authorization of the original inventor
- Requirements for patentability:
 - Novelty: Invention has not been disclosed to the public prior to filing/priority date
 - Inventive step: Invention must not be obvious regarding prior art to a person skilled in the art
 - Industrial applicability: Industrial usefulness and capability of application
- Granted for period of 20 years from filing date/earliest priority date

2. Overview of IPR types in India

- **Trade Secrets:** No Trade Secrets per se in India: Trade Secret law in India is mostly governed via common law such as: Section 27 of the Indian Contract Act (1872)

WIPO:

- trade secrets are IPR on confidential information, which may be sold or licensed
- trade secret is a secret of any trade or business that is known to a limited group of persons

Key points of a trade secret:

- commercial value because it is secret
- known only to limited group of people
- reasonable steps taken by person lawfully in control to keep information secret/confidential

2. Overview of IPR types in India

- **Industrial Design:** The Designs Act, 2000 (“Designs Act”)

'The industrial design recognizes the creation new and original features of new shape, configuration, surface pattern, ornamentations and composition of lines or colours applied to articles which in the finished state appeal to and are judged solely by the eye.'

- ornamental or aesthetic aspect of a useful article
- must be new or original
- design shall not be constrained by functional considerations; includes protection of textile designs
- > exclusive right to prevent others from applying (making, selling, or importing) the protected design to commercial products
- Time period of 10 years

Source: Ahlawata & Associates, 2022 <https://www.ahlawatassociates.com/blog/types-of-intellectual-property-rights-in-india/>

2. Overview of IPR types in India

- **Geographical Indication:** The Geographical Indications of Goods (Registration and Protection) Act, 1999 (“GI Act”)
- A geographical indication is a name or sign used on products which corresponds to a specific geographical location or origin
- Further defines given quality, reputation or other characteristic, which is essentially attributable to geographic origin
- Many goods in India popular due to place of origin; 'Darjeeling tea' for instance is unique due to its origin, skill set of tea farmers and weather in the area
- An application for GI registration requires a statement how GI affects the good etc.
- Basmati Rice, Alphanso Mango, Nagpur Orange, Kolhapuri Chappal, Bikaneri Bhujia, Agra Petha, Paithani and Banaras Saree

Source: Ahlawata & Associates, 2022 <https://www.ahlawatassociates.com/blog/types-of-intellectual-property-rights-in-india/>

2. Overview of IPR types in India

- The Protection of **Plant Varieties and Farmer's Rights** Act, 2001 (“Plant Varieties Act”)
- Aim is to protect and recognize Indian farmers' rights to plant varieties and give incentives for additional and different plant varieties protection in order to support crop planning, crop protection, harvest planning/harvest yields and irrigation planning (also associated with pesticides, climate change/monsoon et cetera...)
- The Plant Varieties Act permits any breeder, farmer and any person as authorized, to apply for registration of a new plant variety. A new plant variety is registrable, if it **satisfies the conditions of 'novelty, distinctiveness, uniformity and stability'**.
- To elaborate, the **condition of novelty requires** that at the date of filing the application (for protection), the plant variety **must not be sold**. Further, distinctiveness encompasses the requirement of having at least one distinguishing factor from all other existing and protected plant varieties.
- The **requirement of uniformity** means that all essential characteristics of the plant variety must be uniform. Lastly, the plant variety being registered for is required to be 'stable', meaning that the essential characteristics of the plant variety must remain unchanged after repeated propagation of such plant variety.
- Since 1994 India: [Article 27(3)(b) of TRIPS]... All plant varieties that have been registered and awarded protection are entered and recorded into the **National Register of Plant Varieties**.
- Protection period **nine years for trees and vines, six years for crops**, with option of renewal of registration



2. Overview of IPR types in India

- The Protection of **Plant Varieties and Farmer's Rights** Act, 2001 (“Plant Varieties Act”) compared to international IP protection methodology:
- **Syngenta**: There are two primary forms of IP protection for plant-related innovation globally:
- **Plant Variety Protection (PVP)**: PVP protects a new plant variety on the basis of the combination of all its phenotypical characteristics, and is suitable for varieties developed through traditional breeding. The term of a PVP differs between countries and depends on plant species, but is generally between 15 and 25 years. PVP rights have specific exceptions, for example the free use of the protected variety for further breeding, or the right for farmers to practice farm-save-seed (saving part of their harvest for use as seed in the next season).
- **Patents**: Patents on plants are only available in a few countries. Patents protect inventions so they are better suited for new traits derived from technical processes such as genetic modification or marker assisted breeding. In contrast to PVP, a patent needs to describe the invention in a way that it can be reproduced by others. Patenting promotes knowledge-sharing.

Source: Syngenta, <https://www.syngenta.com/en/about/faq/intellectual-property-regulatory>



2. Overview of IPR types in India

- The **Semiconductor Integrated Circuits Layout-Design Act, 2000** (“SICLD Act”)

A ‘semiconductor integrated circuit’ is defined as ‘a **product having transistors and other circuitry elements which are inseparably formed on a semiconductor material or an insulating material or inside the semiconductor material and designed to perform an electronic circuitry function**’.

Under the SICLD Act, all layout-designs capable of being registered are **required to be original; commercially unexploited anywhere** in India and in any convention countries; **inherently distinctive and inherently distinguishable** from other registered layout-designs. An application for registration of design layouts has to be in writing and is required to be filed before the **Registrar in the Semiconductor Integrated Circuits Layout-Design Registry** present in the territorial limits of the principal place of business of the applicant.

- Protection period for **10 years**
- **Semiconductor/Fab Investments already made or planned in Gujarat/GIFT City/Dholera Smart City** will make Gujarat/India substantial player in global semiconductor-production /catapult to the top in next 5+ years, if continued progress and strategy is executed

Source: Ahlawata & Associates, 2022 <https://www.ahlawatassociates.com/blog/types-of-intellectual-property-rights-in-india/>

3. Patent Rights v Antitrust Law (U.S.)

- Relationship between antitrust and intellectual property law is/was ambivalent and in constant flux

The constant evolution of the contemporary relationship speaks for the dynamic marketplace the United States Economy is and makes it the greatest place for making business to this day

- But, no force on Earth can stop India and the Indian people from growing the Bharat Economy faster than ever, regaining ground and regaining its righteous place in history as Bharat has always played an important role in supporting and providing for other Economies and Societies

[54] 2,4,5-TRICHLORO- AND 2,4,5-TRIBROMOIMIDAZOLE DERIVATIVES AND PESTICIDAL COMPOSITIONS CONTAINING THEM
 [75] Inventor: Georg Pissiotas, Loerrach, Germany
 [73] Assignee: Ciba-Geigy AG, Switzerland
 [22] Filed: June 23, 1970
 [21] Appl. No.: 49,183

[30] Foreign Application Priority Data
 July 4, 1969 Switzerland..... 10262/69

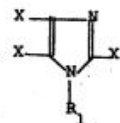
[52] U.S. Cl. 260/309; 424/273
 [51] Int. Cl.² C07D 233/68
 [58] Field of Search 260/309

[56] References Cited
 UNITED STATES PATENTS
 3,423,420 1/1969 Buchel et al. 260/309
 FOREIGN PATENTS OR APPLICATIONS
 1,088,895 10/1967 United Kingdom 260/309
 1,567,374 5/1969 France 260/309

6,407,401 1/1965 Netherlands 260/309

Primary Examiner—Natalie Trouser
 Attorney, Agent, or Firm—Wenderoth, Lind & Ponack

[57] **ABSTRACT**
 The present invention provides compounds of the formula



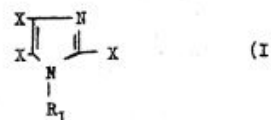
in which X represents chlorine and R₁ represents a substituted or unsubstituted alkenyl group having from 2 to 4 carbon atoms or a benzyl group which may be substituted at the phenyl nucleus, or in which X represents bromine and R₁ represents vinyl-, chloro substituted allyl-, or methallyl-, butenyl or chloro substituted butenyl. The novel compounds are useful for combatting representatives of the order Acarina.

3 Claims, No Drawings

1
2,4,5-TRICHLORO- AND 2,4,5-TRIBROMOIMIDAZOLE DERIVATIVES AND PESTICIDAL COMPOSITIONS CONTAINING THEM

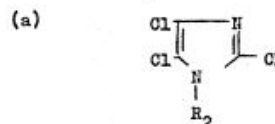
This invention relates to 2,4,5-trichloro- and 2,4,5-tribromoimidazole derivatives and to pesticidal compositions containing them.

The present invention provides compounds of the formula

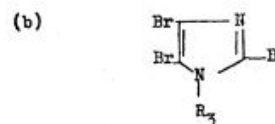


in which X represents a chlorine atom and R₁ represents a substituted or unsubstituted alkenyl group having from 2 to 4 carbon atoms or a benzyl group which may be substituted at the phenyl nucleus, or in which X represents a bromine atom and R₁ represents a substituted or unsubstituted vinyl group, a substituted alkenyl group having 3 or 4 carbon atoms or a benzyl group which is substituted at the phenyl nucleus.

Accordingly, possible compounds are, for example,



in which R₂ represents a substituted or unsubstituted alkenyl group having from 2 to 4 carbon atoms or a benzyl group which may be substituted at the phenyl nucleus, and



in which R₃ represents a substituted or unsubstituted vinyl group, a substituted alkenyl group having 3 or 4 carbon atoms or a benzyl group which is substituted at the phenyl nucleus.

The trichloroimidazoles and tribromoimidazoles of the present invention can be manufactured according to methods which are in themselves known and have already been described in detail in the literature, for example, by reaction of an imidazole of the formula



with a halide of the formula R—Hal, preferably in the presence of an acid-binding agent, X and R having the above specified meanings, and Hal represents a fluorine, chlorine, bromine or iodine atom, preferably a chlorine or bromine atom.

Suitably acid-binding agents are, for example, alkali carbonates and alkali alcohols.

The compounds of the present invention are mainly suitable for combatting representatives of the order Acarina, for example, mites and ticks, as well as all their stages of development, such as eggs, larvae and pupae. Representatives of the order Acarina are, for example, Eulaelaps; Echninolaelaps; Laelaps; Haemogamasus, Dermanyssus; Ornithonyssus; Allodermanyssus, especially Allodermanyssus sanguineus; Pneumonyssus; Amblyomma; Aponomma; Boophilus; Dermacentor; Haemophysalis Hyalomma; Ixodidae; Margaropus; Rhipicephalus; Ornithodoros; Otobius; Cheyletidae, for example, Cheyletus; Psorergates; Demodicidae; Trombiculidae for example Trombicula; Eutrombicula; Schongastia; Acomatacurus; Neoschongastia, Euschongastia; Sarcoptiformes, for example, Notoedres; Sarcoptes; Knemidokoptes; Psoroptidae, for example, Psoroptes, Chlorioptes; Otodectes or Tetranychidae, for example, Tetranychus telarius and Tetranychus urticae.

Accordingly, the present invention also provides a pesticidal composition which comprises, as active ingredient, at least one compound of the general formula.

The compounds of the present invention can be employed by themselves or together with suitable carriers and/or additives. Suitable carriers and additives can be solid or liquid and correspond to the substances which are customary in formulation technology, for example, natural or regenerated substances, solvents, dispersing agents, wetting agents, adhesives, thickeners, binders and/or fertilisers. Furthermore, other insecticidally or acaricidally active compounds can be added, for example,

PHOSPHORIC ACID DERIVATIVES

- Bis-O,O-diethylphosphoric acid anhydride (TEPP)
- O,O,O-Tetrapropylidithiopyrophosphate
- Dimethyl(2,2,2-trichloro-1-hydroxyethyl)phosphonate (TRICHRORFON)
- 1,2-Dibromo-2,2-dichloroethylidimethylphosphate (NALED)
- 2,2-Dichlorovinylidimethylphosphate (DICHLOROFOS)
- 2-Methoxycarbamyl-1-methylvinylidimethylphosphate (MEVINPHOS)
- Dimethyl-1-methyl-2-(methylcarbamoyl)vinylphosphate cis (MONOCROTOPHOS)
- 3-(Dimethoxyphosphinyloxy)-N-methyl-N-methoxycis-crotonamide
- 3-(Dimethoxyphosphinyloxy)-N,N-dimethyl-cis-crotonamide (DICROTOPHOS)
- 2-Chloro-2-diethylcarbamoyl-1-methylvinylidimethylphosphate (PHOSPHAMIDON)
- O,O-Diethyl-O-2-(ethylthio)-ethylthiophosphate (DEMETON)
- O,O-Diethyl-S-2-(ethylthio)-ethylthiophosphate
- S-Ethylthioethyl-O,O-dimethyl-dithiophosphate (THIOMETON)
- O,O-Diethyl-S-ethylmercaptomethylidithiophosphate (PHORATE)
- O,O-Diethyl-S-2-[(ethylthio)ethyl]dithiophosphate (DISULFOTON)

3
 O,O-Dimethyl-S-2-(ethylsulphinyl)ethylthiophosphate (OXYDEMETHONMETHYL)
 O,O-Dimethyl-S-(1,2-dicarbethoxyethyl)dithiophosphate (MALATHION)
 (O,O,O,Tetraethyl-S,S'-methylene-bis-[dithiophosphate]) (ETHION)
 O-Ethyl-S,S-dipropylidithiophosphate
 O,O-Dimethyl-S-(N-methyl-N-formylcarbamoylmethyl)-dithiophosphate (FORMOTON)
 O,O-Dimethyl-S-(N-methylcarbamoylmethyl)dithiophosphate (DIMETHAT)
 O,O-Dimethyl-S-(N-ethylcarbamoylmethyl)dithiophosphate (ETHOATMETHYL)
 O,O-Diethyl-S-(N-isopropylcarbamoylmethyl)-dithiophosphate (PROTHOAT)
 S-N-(1-Cyano-1-methylthyl)carbamoylmethyldiethylthiophosphate (CYANTHOAT)
 S-(2-Acetamidoethyl)-O,O-dimethyldithiophosphate Hexamethylphosphoric acid triamide (HEMPA)
 O,O-Dimethyl-O-p-nitrophenylthiophosphate (PARATHION-METHYL)
 O,O-Diethyl-O-p-nitrophenylthiophosphate (PARATHION)
 O-Ethyl-O-p-nitrophenylthiophosphonate (EPN)
 O,O-Dimethyl-O-(4-nitro-m-tolyl)thiophosphate (FENTROTHION)
 O,O-Dimethyl-O-(2-chloro-4-nitrophenyl)thiophosphate (DICAPHTON)
 O,O-Dimethyl-O-p-cyanophenylthiophosphate (CYANOX)
 O-Ethyl-O-p-cyanophenylthiophosphonate
 O,O-Diethyl-O-2,4-dichlorophenylthiophosphate (DICHROFENTHION)
 O-2,4-Dichlorophenyl-O-methylisopropylamidodithiophosphate
 O,O-Dimethyl-O-2,4,5-trichlorophenylthiophosphate (RONNEL)
 O-Ethyl-O-2,4,5-trichlorophenylethylthiophosphonate (TRICHLORONAT)
 O,O-Dimethyl-O-2,5-dichloro-4-bromophenylthiophosphate (BROMOPHOS)
 O,O-Diethyl-O-2,5-dichloro-4-bromophenylthiophosphate (BROMOPHOS-ETHYL)
 O,O-Dimethyl-O-(2,5-dichloro-4-iodophenyl)-thiophosphate (IODOFENPHOS)
 4-tert. Butyl-2-chlorophenyl-N-methyl-O-methylamidophosphate (CRUFOMAT)
 Dimethyl-p-(methylthio)phenylphosphate
 O,O-Dimethyl-O-(3-methyl-4-methylmercaptophenyl)thiophosphate (FENTHION)
 Isopropylamino-O-ethyl-O-(4-Methylmercapto-3-methylphenyl)-phosphate
 O,O-Diethyl-O-p-[(methylsulphinyl)phenyl]-thiophosphate (FENSULFOTHION)
 O,O-Dimethyl-O-p-sulphamidophenylthiophosphate O-[p-(Dimethylsulphamido)phenyl]O,O-dimethylthiophosphate (FAMPHUR)
 O,O,O',O'-Tetramethyl-O,O'-thiodi-p-phenyleneithiophosphate
 O-(p-(p-Chlorophenyl)azophenyl)O,O-dimethylthiophosphate (AZOTHOAT)
 O-Ethyl-S-phenyl-ethylidithiophosphonate
 O-Ethyl-S-4-chlorophenyl-ethylidithiophosphonate
 O-Isobutyl-S-p-chlorophenyl-ethylidithiophosphonate
 O,O-Dimethyl-S-p-chlorophenylthiophosphate
 O,O-Dimethyl-S-(p-chlorophenylthiomethyl)-dithiophosphate

4
 O,O-Diethyl-p-chlorophenylmercaptomethyl-dithiophosphate (CARBOPHENOTHION)
 O,O-Diethyl-S-p-chlorophenylthiomethyl-thiophosphate
 O,O-Dimethyl-S-(carbomethoxy-phenylmethyl)dithiophosphate (PHENOTHOAT)
 O,O-Diethyl-S-(carbonylurethoxy-phenylmethyl)-dithiophosphate
 O,O-Dimethyl-S-(carbisopropoxy-phenylmethyl)-dithiophosphate
 O,O-Dimethyl-O-(alpha-methylbenzyl-3-hydroxycrotonyl)phosphate,
 2-Chloro-1-(2,4-dichlorophenyl)vinyl-diethylphosphate (CHLORFENVINPHOS)
 2-Chloro-1-(2,4,5-trichlorophenyl)vinyl-diethylphosphate
 O-(2-Chloro-1-(2,5-dichlorophenyl)vinyl)-O,O-diethylthiophosphate
 Phenylglyoxylonitriloxime-O,O-diethylthiophosphate (PHOXIM)
 O,O-Diethyl-O-(3-chloro-4-methyl-2-oxo-2-H-1-benzopyran-7-yl)-thiophosphate (COUMAPHOS)
 O,O-Diethyl-7-hydroxy-3,4-tetramethylene-coumarinyl-thiophosphate (COUMITHOAT)
 2,3-p-Dioxanedithiol-S,S-bis(O,O-diethylthiophosphate) (DIOXATHION)
 2-Methoxy-4-H-1,3,2-benzodioxaphosphorine-2-sulphide
 O,O-Diethyl-O-(5-phenyl-3-isooxazolyl (sic)) thiophosphate
 S-[(6-Chloro-2-oxo-3-benzoxazolyl)methyl]O,O-diethylthiophosphate (PHOSALON)
 2-(Diethoxyphosphinylimino)-4-methyl-1,3-dithiolane
 O,O-Dimethyl-S-[2-methoxy-1,3,4-thiadiazol-5-(4H)-onyl-(4-methyl)dithiophosphate
 Tris-(2-methyl-1-aziridinyl)-phosphine-oxide (ME-TEPA)
 O,O-Dimethyl-S-phthalimidomethyl-dithiophosphate
 S-(2-Chloro-1-phthalimidoethyl)-O,O-diethylthiophosphate
 N-Hydroxynaphthalimido-diethylphosphate
 Dimethyl-3,5,6-trichloro-2-pyridylphosphate
 O,O-Dimethyl-O-(3,5,6-trichloro-2-pyridyl)thiophosphate
 O,O-Diethyl-O-(3,5,6-trichloro-2-pyridyl)thiophosphate
 O,O-Diethyl-O-2-pyrazinylthiophosphate (THIONAZIN)
 O,O-Diethyl-O-(2-isopropyl-4-methyl-6-pyrimidyl)-thiophosphate (DIAZINON)
 O,O-Diethyl-O-(2-quinoxyl)thiophosphate
 O,O-Dimethyl-S-(4-oxo-1,2,3-benzotriazin-3(4H)-ylmethyl)-dithiophosphate (AZINPHOS-METHYL)
 O,O-Diethyl-S-(4-oxo-1,2,3-benzotriazin-3(4H)-ylmethyl)-dithiophosphate (AZINPHOSETHYL)
 S-[(4,6-Diamino-s-triazin-2-yl)methyl]O,O-dimethylthiophosphate (MENZAON)
 S-[2-(Ethylsulphinyl)ethyl]dimethylthiophosphate (DIOXYDEMETHON-S-METHYL)
 Diethyl-S-[2-(ethylsulphinyl)ethyl]dithiophosphate (OXYDISULFOTON)
 Bis-O,O-diethylthiophosphoric acid anhydride (SULFOTEP)
 Dimethyl-1,3-di(carbomethoxy)-1-propen-2-yl-phosphate

5
 Dimethyl-(2,2,2-trichloro-1-butyroxyethyl)phosphonate (BUTONAT)
 O,O-Dimethyl-O-(2,2-dichloro-1-methoxy-vinyl)-phosphate
 O,O-Dimethyl-O-(3-chloro-4-nitrophenyl)thiophosphate (CHLORTHION)
 O,O-Dimethyl-O-(or S)-2-(ethylthioethyl)thiophosphate (DEMETHON-S-METHYL)
 Bis-(dimethylamido)fluorophosphate (DIMEFOX)
 2-(O,O-Dimethyl-phosphoryl-thiomethyl)-5-methoxy-pyrene-4
 3,4-Dichlorobenzyl-triphenylphosphonium chloride
 Dimethyl-N-methoxymethylcarbamoylmethyl-dithiophosphate (FORMOCARBAM)
 O,O-Diethyl-O-(2,2-dichloro-1-chlorethoxyvinyl)-phosphate
 O,O-Dimethyl-O-(2,2-dichloro-1-chlorethoxyvinyl)-phosphate
 O-Ethyl-S,S-diphenyldithiophosphate
 O-Ethyl-S-benzyl-phenyldithiophosphonate
 O,O-Diethyl-S-benzyl-thiophosphate
 O,O-Dimethyl-S-(4-chlorophenylthiomethyl)dithiophosphate (METHYL CARBOPHENOTHION)
 O,O-Dimethyl-S-(ethylthiomethyl)dithiophosphate
 Diisopropylamino fluorophosphate (MIPAFOS)
 O,O-Dimethyl-S-(morpholinylcarbamoylmethyl)dithiophosphate (MORPHOTHION)
 Bismethylamido-phenylphosphate
 O,O-Dimethyl-S-(benzenesulphonyl)dithiophosphate
 O,O-Dimethyl-(S and O)-ethylsulphinylethylthiophosphate
 O,O-Diethyl-O-4-nitrophenylphosphate
 O,O-Diethyl-S-(2,5-dichlorophenylthiomethyl)dithiophosphate (PHENDAPTON)
 Triethoxy-isopropoxy-bis (thiophosphinyl)disulphide
 O,O-Diethyl-O-(4-methyl-coumarinyl-7)-thiophosphate (POTASAN)
 2-Methoxy-4H-1,3,2-benzodioxaphosphorine-2-oxide
 Octamethylpyrophosphoramide (SCHRADAN)
 Bis(dimethoxythiophosphinylsulphido)-phenylmethane
 5-Amino-bis(dimethylamino)phosphinyl-3-phenyl-1,2,4-triazole (TRIAMPHOS)
 N-Methyl-5-(O,O-Dimethylthiophosphoryl)-3-thiavalaramide (VAMIDOTHION) and
 N,N,N',N'-Tetramethyldiamidofluorophosphate (DIMEFOX)

CARBAMIC ACID DERIVATIVES
 1-Naphthyl-N-methylcarbamate (CARBARYL)
 2-Butyl-4-chlorophenylcarbamate
 4-Dimethylamino-3,5-xylyl-N-methylcarbamate
 4-Dimethylamino-3-tolyl-N-methylcarbamate (AMINOCARB)
 4-Methylthio-3,5-xylyl-N-methylcarbamate (METHIOCARB)
 3,4,5-Trimethylphenyl-N-methylcarbamate
 2-Chlorophenyl-N-methylcarbamate (CPMC)
 5-Chlor-6-oxo-2-norbornane-carbonitrile-O-(methylcarbamoyl)-oxime
 1-(Dimethylcarbamoyl)-5-methyl-3-pyrazolyl-N,N-dimethylcarbamate (DIMETILAN)
 2,3-Dihydro-2,2-dimethyl-7-benzofuran-N-methylcarbamate (CARBOFURAN)
 2-Methyl-2-methylthio-propionaldehyde-O-(methylcarbamoyl)oxime (ALDICARB)

6
 8-Quinaldyl-N-methylcarbamate and its salts
 Methyl 2-isopropyl-4-(methylcarbamoyloxy)carbanilate
 m-(1-Ethylpropyl)phenyl-N-methylcarbamate
 3,5-Di-tert-butyl-N-methylcarbamate
 m-(1-Methylbutyl)phenyl-N-methylcarbamate
 2-Isopropylphenyl-N-methylcarbamate
 2-sec-Butylphenyl-N-methylcarbamate
 m-Tolyl-N-methylcarbamate
 2,3-Xylyl-N-methylcarbamate
 3-Isopropylphenyl-N-methylcarbamate
 3-tert-Butylphenyl-N-methylcarbamate
 3-sec-Butylphenyl-N-methylcarbamate
 3-Isopropyl-5-methylphenyl-N-methylcarbamate (PROMECARB)
 3,5-Diisopropylphenyl-N-methylcarbamate
 2-Chlor-5-isopropylphenyl-N-methylcarbamate
 2-Chloro-4,5-dimethylphenyl-N-methylcarbamate
 2-(1,3-Dioxolan-2-yl)phenyl-N-methylcarbamate (DIOXYCARB)
 2-(4,5-Dimethyl-1,3-dioxolan-2-yl)phenyl-N-methylcarbamate
 2-(1,3-Dioxan-2-yl)phenyl-N-methylcarbamate
 2-(1,3-Dithiolan-2-yl)phenyl-N-methylcarbamate
 2-(1,3-Dithiolan-2-yl)phenyl-N,N-dimethylcarbamate
 2-Isopropoxyphenyl-N-methylcarbamate (AR-PROCARB)
 2-(2-Propinyloxy)phenyl-N-methylcarbamate
 2-(2-Propinyloxy)phenyl-N-methylcarbamate
 3-(2-Propinyloxy)phenyl-N-methylcarbamate
 2-Dimethylaminophenyl-N-methylcarbamate
 2-Diallylaminophenyl-N-methylcarbamate
 4-Diallylamino-3,5-xylyl-N-methylcarbamate (ALLYXCARB)
 4-Benzothienyl-N-methylcarbamate
 2,3-Dihydro-2-methyl-7-benzofuran-N-methylcarbamate
 3-Methyl-1-phenylpyrazol-5-yl-N,N-dimethylcarbamate
 1-Isopropyl-3-methylpyrazol-5-yl-N,N-dimethylcarbamate (ISOLAN)
 2-(N',N'-Dimethylcarbamoyl)-3-methylpyrazol-5-yl-N,N-dimethylcarbamate
 2-Dimethylamino-5,6-dimethylpyrimidin-4-yl-N,N-dimethylcarbamate
 3-Methyl-4-dimethylaminomethyleneiminophenyl-N-methylcarbamate
 3-Dimethylamino-methyleneiminophenyl-N-methylcarbamate
 1-Methylthio-ethylimino-N-methylcarbamate (METHOXYMYL)
 2-Methylcarbamoyloxyimino-1,3-dithiolane
 5-Methyl-2-methylcarbamoyloxyimino-1,3-oxathiolane
 2-(1-Methoxy-2-propoxy)phenyl-N-methylcarbamate
 2-(1-Butin-3-yl-oxy)phenyl-N-methylcarbamate
 3-Methyl-4-(dimethylamino-methylmercaptomethyleneimino) phenyl-N-methylcarbamate
 1,3-Bis(carbamoylthio)-2-(N,N-dimethylamino)-propane hydrochloride
 5,5-Dimethylhydroresorcinoldimethylcarbamate
 2-[Propargylethylamino]-phenyl-N-methylcarbamate
 2-[Propargylmethylamino]-phenyl-N-methylcarbamate
 2-[Dipropargylamino]-phenyl-N-methylcarbamate

7

- 3-Methyl-4-[dipropargylamino]-phenyl-N-methylcarbamate
3,5-Dimethyl-4-[dipropargylamino]-phenyl-N-methylcarbamate
2-[Allyl-isopropylamino]-phenyl-N-methylcarbamate and
3-[Allyl-isopropylamino]-phenyl-N-methylcarbamate.

CHLORINATED HYDROCARBONS

- γ -Hexachlorocyclohexane [Gammerxane; Lindane; γ HCH]
1,2,4,5,6,7,8-Octachloro-3 α ,4, 7, 7 α' -tetrahydro-4,7-methyleneindane [Chlordan]
1,4,5,6,7,8,8-Heptachloro-3 α ,4,7,7 α' -tetrahydro-4,7-methyleneindane [Heptachlor]
1,2,3,4,10,10-Hexachloro-1,4,4 α ,5,8,8 α -hexahydroendo-1,4-exo-5,8-dimethanonaphthalene [Aldrin]
1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4 α ,5,6,7,8,8 α ,9-octahydro-exo-1,4-endo-5,8-dimethanonaphthalene [Dieldrin] ditto, endo-endo- [Endrin]
6,7,8,9,10,10-Hexachloro-1,5,5 α ,6,9,9 α -hexahydro-6,9-methano-2,3,4 benzo[c]-dioxathiepine-3-oxide [Endosulfan]
Chlorinated camphor [Toxaphen]
Decachlorotetrahydro-1,3,4-metheno-2H-cyclobuta[c]d] pentalen-2-one
Dodecachlorooctahydro-1,3,4-metheno-1H-cyclobuta[c]d]pentalene [Mirex]
Ethyl-1,1 α ,3,3 α ,4,5,5 α ,5 α ,6-decachlorooctahydro-2-hydroxy-1,3,4-metheno-1H-cyclobuta[c]d]pentalene-2-laevalinate
Bis(pentachloro-2,4-cyclopentadien-1-yl) Dinocetone-o
1,1,1-Trichloro-2,2-bis(p-chlorophenyl)ethane [DDT]
Dichlorodiphenyl-dichlorethane [TDE]
Di(p-chlorophenyl)-trichloromethylcarbinol [Dico-fol]
Ethyl-4,4'-dichlorophenylglycolate [Chlorobenzylate]
Ethyl-4,4'-dibromobenzylate [Bromobenzylate]
Isopropyl-4,4'-dichlorobenzylate
1,1,1-Trichloro-2,2 bis(p-methoxyphenyl)ethane [Methoxychlor]
Diethyl-diphenyl-dichlorethane
Decachloropentacyclo(3,3,2, O^{3,4}, O^{3,6}, O^{3,10})decan-4-one [Chlordecon].

NITROPHENOLS AND DERIVATIVES

- 4,6-Dinitro-6-methylphenol Na salt [dinitroresol]
Dinitrobutylphenyl-2,2',2''-triethanolamine salt
2-Cyclohexyl-4,6-dinitrophenol [Dinex]
2-(1-Methylheptyl)-4,6-dinitrophenyl-crotonate [Dinocap]
2 sec.-Butyl-4,6-dinitrophenyl-3-methyl-butenate [Binapacryl]
2 sec.-Butyl-4,6-dinitrophenyl-cyclopropionate and
2 sec.-Butyl-4,6-dinitrophenyl-isopropyl-carbonate [Dinobuton]

VARIOUS SUBSTANCES

- Sabadilla
Rotenon
Cevadin
Veratridin
Ryania
Pyrethrin

8

- 3-Allyl-2-methyl-4-oxo-2-cyclopenten-1-yl-chrysanthemumate (Allethrin)
6-Chloropiperonyl-chrysanthemumate (Barthrin)
2,4-Dimethylbenzyl-chrysanthemumate (Dimethrin)
2,3,4,5-Tetrahydrophthalimidomethyl-chrysanthemumate (5-Benzyl-3-furyl)-methyl-2,2-dimethyl-3-(2-methylpropanyl) cyclopropanecarboxylate
Nicotine
Bacillus thuringiensis Berliner
Dicyclohexylcarbodiimide
Diphenylidimide [azobenzene (sic)]
4-Chlorobenzyl-4-chlorophenylsulphide [Chlorobenzid]
Creosote oil
6-Methyl-2-oxo-1,3-dithiolo-[4,5-b]-quinoxaline [Quinomethionat]
(1)-3-(2-Furfuryl)-2-methyl-4-oxocyclopent-2-enyl-(1)-(cis+ trans)chrysanthemum-monocarboxylate [Furethrin]
2-Pivaloyl-indane-1,3-dione [Pindon]
2-Fluorethyl(4-bisphenyl)acetate
2-Fluoro-N-methyl-N(1-naphthyl)-acetamide
Pentachlorophenol and salts
2,2,2-Trichloro-N-(pentachlorophenyl)-acetimidoyl chloride
N'-(4-Chloro-2-methylphenyl)-N,N-dimethylformamide chlorphenamide
4-Chlorobenzyl-4-fluorophenyl-sulphide (Fluorobenzide)
5,6-Dichloro-1-phenoxy-carbonyl-2-trifluoromethylbenzimidazole (Fenozaflor)
Tricyclohexyl-tin hydroxide
2-Thiocyanatoethyl-lauric acid ester
 β -Butoxy- β' -thiocyanatodiethyl-ether
Isobornyl-thiocyanatoacetate
p-Chlorophenyl-p-chlorobenzenesulphonate (Ovex)
2,4-Dichlorophenyl-benzenesulphonate
p-Chlorophenyl-benzenesulphonate (Fenson)
p-Chlorophenyl-2,4,5-trichlorophenylsulphone (Tetradifon)
p-Chlorophenyl-2,4,5-trichlorophenylsulphide (Tetrasul)
Methyl bromide
p-chlorophenyl-phenylsulphone
p-Chlorobenzyl-p-chlorophenylsulphide (Chlorobenzide)
4-Chlorophenyl-2,4,5-trichlorophenylazosulphide
2(p-tert.-Butylphenoxy)-1-methylethyl-2-chlorethyl-sulphite
2(p-tert.-Butylphenoxy)cyclohexyl-2-propinyl-sulphite
4,4'-Dichloro-N-methylbenzenesulphonanilide
N-(2-Fluoro-1,1,2,2-tetrachlorethylthio)-methanesulphonanilid
2-Thio-1,3-dithiolo-(4,5-6)quinoxaline (Thioquinox)
Chloromethyl-p-chlorophenylsulphone (lauseto (sic!) new)
1,3,6,8-Tetranitrocarbazole and
Prop-2-ynyl-(4-t-butylphenoxy)-cyclohexylsulphite (Propargil).

65 For application, the compounds of the present invention can be processed into dusting agents, emulsion concentrates, granules, dispersions, sprays, solutions or suspensions of the usual formulation.

9

Suitable substances for the manufacture of directly sprayable solutions of the compounds of the present invention are, for example, mineral oil fractions of high to medium boiling range, such as diesel oil or kerosene, coal tar oils and oils of vegetable or animal origin, as well as hydrocarbons, such as alkylated naphthalenes, or tetrahydronaphthalene, optionally using xylene mixtures, cyclohexanols, ketones and chlorinated hydrocarbons, such as trichlorethane and tetrachlorethane, trichlorethylene or trichlorobenzenes and tetrachlorobenzenes. Organic solvents of boiling point above 100°C are advantageously used.

Aqueous application forms are especially advantageously prepared from emulsion concentrates, pastes or wettable spraying powders by addition of water. Suitable dispersing agents are non-ionic products, for example, condensation products of aliphatic alcohols, amines or carboxylic acids having a long-chain hydrocarbon radical of about 10 to 20 carbon atoms and ethylene oxide, such as the condensation product of octadecyl alcohol and 25 to 30 mols of ethylene oxide, or that of soya fatty acid and 30 mols of ethylene oxide or that of technical oleylamine and 15 mols of ethylene oxide or that of dodecylmercaptan and 12 mols of ethylene oxide. Amongst the anionic dispersing agents which can be employed there may, for example, be mentioned: the sodium salt of dodecyl alcohol sulphuric acid ester, the sodium salt of dodecylbenzenesulphonic acid, the potassium or triethanolamine salt or oleic acid or of abietic acid or of mixtures of these acids, or the sodium salt of a petroleum-sulphonic acid. Suitable cationic dispersing agents are quaternary ammonium compounds, for example, cetylpyridinium bromide or dihydroxyethylbenzyl-dodecylammonium chloride.

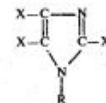
To manufacture dusting agents and sprinkling agents, talc, kaolin, bentonite, calcium carbonate and calcium phosphate, as well as coal, cork powder, wood flour and other materials of vegetable origin can be employed as solid carriers. It is also very appropriate to manufacture preparations in a granular form. The various use forms can, in the customary manner, be provided with addition of substances which improve the distribution, the adhesion, the rain resistance or the penetrating power; such substances are, for example, fatty acids, resins, glue, casein or alginates.

The content of the active ingredient in the compositions described above lies between 0.1 and 95%, and at the same time is should be mentioned that in the case of application from aircraft or by means of other suitable application instruments concentrations of up to 99.5% or even pure active substance can be employed.

The application of these agents in the veterinary field takes place in accordance with the customary processes, for example in accordance with the spraying, pouring, dusting and fumigating process. The so-called dipping process, in which the animal is driven through a solution or dispersion of the agent, is also effective.

The preparations for application in the spraying, pouring and dipping process preferably contain from 0.05% to 0.5% of the active ingredient.

The present invention also provides a method of combatting ticks and mites, which comprises applying thereto a compound of the formula



10

in which X represents a chlorine atom or a bromine atom and R represents an alkyl group having from 1 to 4 carbon atoms an alkenyl group having from 2 to 4 carbon atoms, a phenyl group or a benzyl group which may be substituted at the phenyl nucleus. The alkyl and alkenyl groups which are represented by R can be branched or straight-chain, unsubstituted or substituted. Suitable alkyl and alkenyl groups are, for example, methyl, trifluoromethyl, ethyl, propyl, isopropyl, n-, i-, sec.- and tert.-butyl, vinyl, allyl, methallyl, chloro-allyl and methylpropenyl groups. The substituents on the alkyl, alkenyl and phenyl groups and on the phenyl nucleus of the benzyl group can be of the first or second order.

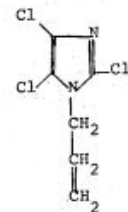
By substituents of the first order there are herein especially meant electron donors which intensify the basicity. Suitable groups for this purpose are, inter alia, the following halogen atoms, for example, fluorine, chlorine, bromine or iodine atoms; alkoxy and alkylthio groups having from 1 to 4 carbon atoms and which can be branched or unbranched, but are preferably unbranched and have 1 or 2 carbon atoms; lower alkoxyalkylene groups; primary, secondary and, especially, tertiary amino groups, with lower alkyl and alkanol groups being preferred substituents; hydroxyl groups and mercapto groups. In the case of the phenyl radicals and the phenyl nucleus of the benzyl group, further possible substituents are alkyl and monohalogenalkyl and dihalogenalkyl groups.

By substituents of the second order, there are herein especially meant acidifying electron donors. Suitable groups are, inter alia, the following: nitroso, nitro and nitrile groups; trihalogenalkyl groups, in which the halogen atoms are preferably fluorine and chlorine atoms; lower alkyl sulphonyl and lower alkylsulphonyl groups, which possess a branched or unbranched alkyl radical having from 1 to 4 carbon atoms, preferably an unbranched alkyl radical having 1 or 2 carbon atoms.

The following Examples illustrate the invention.

EXAMPLE I

23 g of trichloroimidazole, 12.8 ml of allyl bromide, 20.4 g of potassium carbonate and 150 ml of acetone were boiled overnight under reflux. After cooling, the mixture was filtered and the filtrate was concentrated in vacuo. The residual oil was subjected to fractional distillation, whereupon the compound of formula

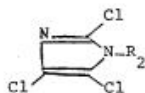


was obtained in the pure form.
Boiling point: 83°C at 0.15 mm Hg. Yield 86%.

11

The following compounds were manufactured analogously:

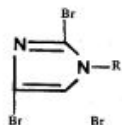
Compound No.



boiling point/melting point, °C

1.2	$-\text{CH}_2-\text{C}(\text{CH}_3)=\text{CH}_2$	85/0.08 mm Hg
1.3	$-\text{CH}_2-\text{CH}=\text{CHCl}$	100/0.13 mm Hg
1.4	$-\text{CH}_2-\text{C}(\text{Cl})=\text{CH}_2$	104/0.15 mm Hg

Compound No.



boiling point/melting point, °C

2.1	$-\text{CH}_2-\text{CH}=\text{CH}_2$	120/0.12 mm Hg
2.2	$-\text{CH}_2-\text{C}(\text{CH}_3)=\text{CH}_2$	92/0.04 mm Hg
2.3	$-\text{CH}_2-\text{CH}=\text{CH}-\text{Cl}$	84/0.05 mm Hg
2.4	$-\text{CH}_2-\text{C}(\text{Cl})=\text{CH}_2$	97/0.05 mm Hg
2.5	$-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{CH}_2$	124/0.06 mm Hg
2.6	$-\text{CH}_2-\text{CH}_3$	62 - 64
2.7	$-\text{CH}_2-\text{CH}=\text{CH}-\text{CH}_3$	120/0.06 mm Hg
2.8	$-\text{CH}_3$	93 - 94.5
2.9	$-\text{CH}_2-\text{CH}_2-\text{CH}_2$	74 - 76
2.10	$-\text{CH}_2-\text{CH}(\text{Cl})-\text{CH}_3$	82 - 83

2.11		68-69
------	--	-------

2.12		166 - 168
------	--	-----------

2.13		160 - 162
------	--	-----------

2.14		91 - 92
------	--	---------

12

-continued

5	2.15		99 - 100
---	------	--	----------

10	2.16		149 - 151
----	------	--	-----------

15	2.17		244 - 246
----	------	--	-----------

20	2.17		244 - 246
----	------	--	-----------

EXAMPLE 2 DUSTING AGENTS

Equal parts of an active substance of formula I and of precipitated silica were finely ground. Dusting agents, preferably containing 1-6% of active substance, could be manufactured therefrom by mixing with kaolin or talc.

SPRAYING POWDERS

In order to manufacture a spraying powder, the following components were for example mixed and finely ground:

- 50 parts of active substance according to the present invention
- 20 parts of highly adsorbent silica
- 25 parts of Bolus alba (kaolin)
- 1.5 parts of sodium 1-benzyl-2-stearyl-benzimidazole-6,3'-disulphonate and
- 3.5 parts of a reaction product of p-tert.octylphenol and ethylene oxide.

EMULSION CONCENTRATE

Easily soluble active substances were formulated as an emulsion concentrate in accordance with the following instruction:

- 20 parts of active substance
- 70 parts of xylene and
- 10 parts of a mixture of a reaction product of an alkylphenol with ethylene oxide and calcium dodecylbenzenesulphonate are mixed. On dilution with water to the desired concentration, a sprayable emulsion resulted.

GRANULES

- 7.5 g of one of the active substances of formula I were dissolved in 100 ml of acetone and the acetone solution thus obtained was added to 92 g of granular attapulgite. The whole was well mixed and the solvent was stripped off in a rotary evaporator. Granules containing 7.5 % of active substance were obtained.

EXAMPLE 3

A. *Rhipicephalus bursa*

13

Batches of 5 adult ticks or of 50 tick larvae were counted out into a glass test tube and dipped for 1 to 2 minutes in 2 ml of an aqueous emulsion from a dilution series with 100, 10, 1 and 0.1 ppm of test substance respectively. The test tube was then closed with a standard cottonwool pad and inverted so that the active substance emulsion could be taken up by the cottonwool.

Evaluation took place after 2 weeks in the case of the adults and up to 2 days in the case of the larvae. 2 repeats were run for each experiment.

100 % destruction was found at the following limiting concentrations (ppm):

Active Substance No.	<i>Rhipicephalus bursa</i>	
	Adult	Larvae
2.1	5	5
2.2	0.5	0.5
2.3	5	5
2.4	5	5
2.7	10	50

B. *Boophilus microplus* (larvae)

Experiments were carried out with batches of 20 sensitive or OP-resistant larvae, with an analogous dilution series to that of Test A. (The resistance relates to the toleration of diazinone). 100 % destruction was found at the following limiting concentrations (ppm) after 2 weeks:

Active Substance No.	<i>Boophilus microplus</i> (larvae)	
	OP-resistant	sensitive
2.1	5	5
2.2	1	1
2.3	5	5
2.4	5	5
2.7	50	10

C. *Dermanyssus gallinae*

The test was carried out analogously to Method A but with 20 mites. The evaluation took place after 72 hours.

100 % destruction was found at the following limiting concentrations (ppm):

Active Substance No.	<i>Dermanyssus gallinae</i>	
2.1	100	
2.2	100	
2.3	100	
2.4	100	
2.7	50	

EXAMPLE 4

Action against spider mites.

Bush bean plants (*Phaseolus vulgaris*) in the two-leaf stage, were infected with spider mites, 12 hours before the treatment with the active substance, by placing attacked pieces of leaf from a culture on them, so that after the expiration of this time a population in all stages of development was present on the plant. The plants were then sprayed with the emulsified active substance, with the aid of a chromatography atomiser, top a uniform deposit of droplets was formed on the top surface of the leaf. After 2 and 7 days, the results were evaluated: the plant parts were inspected under a

stereo-microscope for calculation of the percentages of destruction. The effect on eggs was not yet ascertainable after 2 days with this experimental arrangement, because the average hatching time was not yet accurately known at this point in time.

The table which follows gives the percentages of destruction of the normally sensitive variety *Tetranychus urticae* Koch and the percentages of destruction of the phosphoric acid ester-tolerant variety *Tetranychus telarius* L.

Active Substance No. 2.3

a. Action against *Tetr. urticae*

DESTRUCTION IN PERCENTAGES

Conc. (ppm)	after 2 days			after 7 days		
	Larvae	Adults	Eggs	Larvae	Adults	Eggs
800	100	100	100	100	100	100
400	100	100	100	100	100	100
200	100	100	60	80	100	100
100	80	100	0	60	80	80

Active Substance No. 2.3

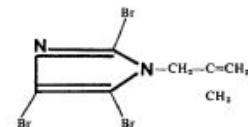
b. Action against *Tetr. telarius*

DESTRUCTION IN PERCENTAGES

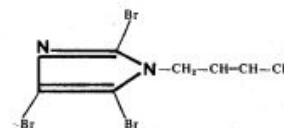
Conc. (ppm)	after 2 days			after 7 days		
	Larvae	Adults	Eggs	Larvae	Adults	Eggs
800	100	100	80	100	100	100
400	100	100	80	100	100	100
200	100	100	60	60	100	100
100	80	100	0	0	80	80

I claim:

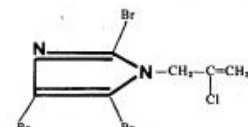
1. The compound of the formula



2. The compound of the formula



3. The compound of the formula



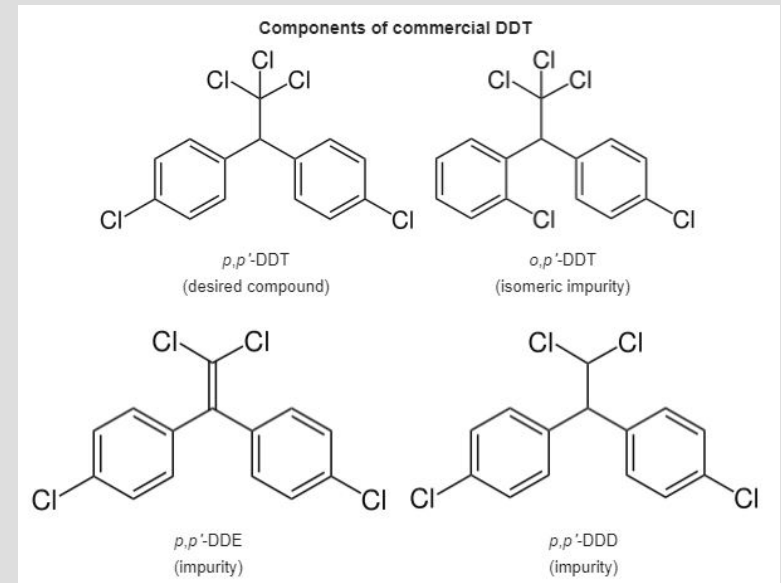
* * * * *

3. Patent Rights v Antitrust Law

- Examples of Dichlorodiphenyltrichloroethane (DDT)

Isomers and related compounds:

- Dichlorodiphenyldichloroethylene (DDE)
- Dichlorodiphenyldichloroethane (DDD)



are also major metabolites and environmental breakdown products -> also FDA and WHO 'came into action' in addition to market power considerations

- Originally developed as an insecticide (Zeidler), then also used against malaria and typhus (Müller); in some limited form against malaria to this day
- Other examples of intersection/interrelationship: Ciba/Sandoz Merger; Patent Pooling: DVD and MPEG-2 Technology Pools; Exclusive Licensing; Cross-Licensing; grant-back licensing (law) In U.S. patent law, a license under which a party grants another the right to use a patent under the condition that the licensee agrees to grant the licensor a license with respect to any improvements to that patent made by the licensee.

Source: DDT Wikipedia, <https://en.wikipedia.org/wiki/DDT>

Source: FTC, <https://www.ftc.gov/news-events/news/speeches/antitrust-intellectual-property-law-adversaries-partners#C.%20Antitrust>

4. Categories of Intangible Assets following IFRS3 (IAS)

- When it comes to **Financial Accounting** additional rules apply to examine and formulate a R&D strategy/Financial Accounting/Financial Reporting/Investment Reporting/Taxation Regulation
Global Intangible Finance Tracker (GIFT™) 2023 <https://static.brandirectory.com/reports/brand-finance-gift-2023-2.pdf>

Definitions.

Intangible assets can be grouped into three broad categories – rights, relationships and intellectual property:

1 Rights. Leases, distribution agreements, employment contracts, covenants, financing arrangements, supply contracts, licences, certifications, franchises.

2 Relationships. Trained and assembled workforce, customer and distribution relationships.

3 Intellectual property. Patents; copyrights; trademarks; proprietary technology (for example, formulas, recipes, specifications, formulations, training programmes, marketing strategies, artistic

techniques, customer lists, demographic studies, product test results); business knowledge — such as suppliers' lead times, cost and pricing data, trade secrets and knowhow.

Internally generated intangibles cannot be disclosed on the balance sheet, but are often significant in value, and should be understood and managed appropriately. Under IFRS 3, only intangible assets that have been acquired can be separately disclosed on the acquiring company's consolidated balance sheet (disclosed intangible assets).

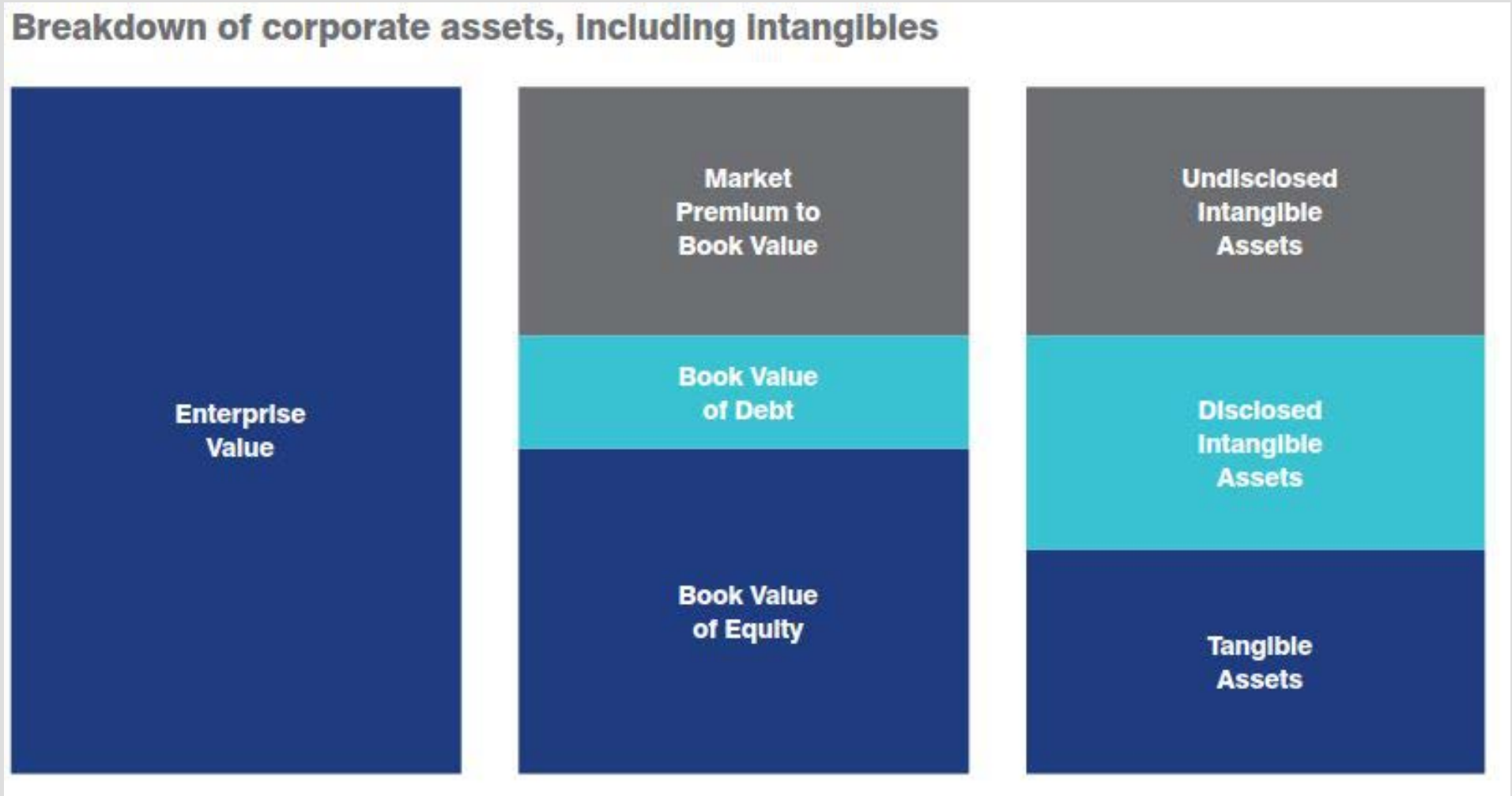
The following diagram illustrates how intangible value is made up of both disclosed and undisclosed value.

4. Categories of Intangible Assets following IFRS3

Categories of Intangible asset under IFRS 3				
Marketing-Related Intangible Assets	Customer-Related Intangible Assets	Contract-Based Intangible Assets	Technology-Based Intangible Assets	Artistic-Related Intangible Assets
<ul style="list-style-type: none"> Trademarks, tradenames Service marks, collective marks, certification marks Trade dress (unique colour, shape, or package design) Newspapers Internet Domain Names Mastheads Non-competition agreements 	<ul style="list-style-type: none"> Customer lists Order or production backlog Customer contracts & related customer relationships Non-contractual customer relationships 	<ul style="list-style-type: none"> Licensing, royalty, standstill agreements Advertising, construction, management, service or supply contracts Lease agreements Construction permits Permits Franchise agreements Operating and broadcast rights Use rights such as drilling, water, air, mineral, timber cutting & route authorities Servicing contracts such as mortgage servicing contracts Employment contracts 	<ul style="list-style-type: none"> Patented technology Computer software and mask works Unpatented technology Databases Trade secrets, such as secret formulas, processes, recipes 	<ul style="list-style-type: none"> Plays, operas and ballets Books, magazines, newspapers and other literary works Musical works such as compositions, song lyrics and advertising jingles Pictures and photographs Video and audio-visual material, including films, music, videos etc.

Source: Global Intangible Finance Tracker (GIFT™) 2023 <https://static.brandirectory.com/reports/brand-finance-gift-2023-2.pdf>

4. Categories of Intangible Assets following IFRS3



Source: Global Intangible Finance Tracker (GIFT™) 2023 <https://static.brandirectory.com/reports/brand-finance-gift-2023-2.pdf>

5. Different Industries – Different layers of complexity

- New pharmaceutical products like medicines/drugs or pharmaceutical formulations requires substantial efforts/time and immense investment -> securing developments via i.e. patents
- At the same time after invention/development or new subcombination of derivative compounds of existing chemicals or medical treatments federal agencies like the U.S. Food and Drug Administration (FDA) require the passage of phase 1 (treatment safe?)/phase 2 (does the treatment work?)/phase 3 (better than what's already available?) studies/clinical trials before a new drug/treatment is allowed to be marketed (in addition to patent rights)
- This multi-stage process presents pharmaceutical companies with a maze of decades long costs/immense investments and investment risks (only applying for a patent via a patent application doesn't automatically mean you get a patent granted; only cause you got a patent granted doesn't mean clinical trials via the FDA are automatically approved and can not seldom mean complete loss of investment and corresponding investment risks for the shareholders (P/E ratio, dividend-risk, financial risks); -> Glivec
- Similar situation/multi-layered decade long process for instance for **crop protection/agriculture** companies -> **also need of a separate license to sell crop protection products**

Source: cancer.org <https://www.cancer.org/cancer/managing-cancer/making-treatment-decisions/clinical-trials/what-you-need-to-know/phases-of-clinical-trials.html>
Source: U.S. Food & Drug Administration (FDA) Clinical Trials Guidance Documents <https://www.fda.gov/science-research/clinical-trials-and-human-subject-protection/clinical-trials-guidance-documents>

6. Glivec™ by Novartis

- Glivec™ (imatinib mesylate) by Novartis: prescription drug against Chronic Myeloid Leukemia

'After more than a decade of legal battles surrounding its patentability, the Supreme Court of India gave its final decision on April 1st of 2013, rejecting the appeal of the Swiss giant drug manufacturer. In 2006, the Indian Patent Office first refused Glivec's patent under Section 3(d) of the Indian Patent Act arguing that it was **only a modified version of an existing drug**, Imatinib, and therefore that the drug was not innovative. Novartis replied filing legal challenges against the Indian government but the final verdict in April of 2013 ends the battle. Indeed, the Supreme Court stated that even if the bioavailability of the drug was improved, it did not demonstrate enhanced efficacy and that Glivec was not patentable.'

(U.S. Serial No. 12/094,629: CRYSTALLINE FORM F OF IMATINIB MESYLATE)

Source: NCBI/NIH <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3884017/#:~:text=Background,blood%20cancers%20in%20eastern%20countries.>

6. Glivec™ by Novartis

- According to Lee [4], studies have shown that **Glivec is “almost ten times more effective than traditional interferon therapy”**, due to its ability to target specific cancer proteins. However, **“the drug does not give a permanent cure from cancer ... [it] only stalls its progress.** For patients, the drug needs to be taken lifelong” [10]. For this reason, along with the fact that **95% of Indians do not possess private health insurance**, its pricing plays a critical factor in cancer patients’ ability to access a continuous supply of Glivec for effective treatment. What is important to bear in mind, is that there is a **significant price gap between the patented version of Glivec and its generic copy**, as a monthly dose of the former can cost as much as USD\$5,000 in the U.S., whereas a monthly dose of the latter can be purchased for just USD\$200 in India [9]. In 2006, the Indian Patent Office rejected Novartis’ patent application for Glivec under Section 3(d) of the Indian Patents Act, stating that the **drug was a modification of an existing substance, imatinib**, and therefore represented a case of ‘evergreening’ [15]. Section 3(d) articulates that reformulations of pre-existing drugs, **which do not improve the efficacy of the product, are ineligible for extended patents** [16].

(U.S. Serial No. 12/094,629: CRYSTALLINE FORM F OF IMATINIB MESYLATE)

Source: NCBI/NIH <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3884017/#:~:text=Background,blood%20cancers%20in%20eastern%20countries.>

7. Intangible Assets: R&D Accounting/Taxation (OECD)

- Intangible Assets and R&D require specific financial accounting conformity in different countries also because of Taxation Regulation

-> This presents companies operating globally an additional maze and intercommingled layers of complexity

- Licensing, accounting and valuation of IPR require country-by-country specific financial accounting and financial reporting depending also on whether an entity is a holding, operating or trading-company also depending on the domicile
- Optimizing R&D investment and tax rates through another maze of financial accounting complexity -> Base Erosion BEPS/Transfer Pricing -> Loss of Tax Revenues for some countries
- The Organization for Economic Co-operation and Development (OECD) proposed and now introduced Global Anti-Base Erosion Model Rules *GloBE* (Pillar Two) together with a global minimum tax rate of 15% for corporations *intends* to level the playing field following rules also regarding non-material constituent entities excluded from consolidated financial statements (also Group-Accounting) solely on size or 60% materiality thresholds, interest income, royalties, qualified domestic minimum top-up tax (QDMTT) to local tax authorities, safe harbour, Arm's length principle regarding Transfer Pricing et cetera...
- When it comes to countries like Switzerland (especially in Basel) some exceptions to the OECD global minimum tax rate of 15% are possible (only within some revenue limits and non-group profits) for net tonnage taxation for trading companies, which can be part of R&D expenses and be entitled to R&D subsidies, when actual R&D and IPR operations are taking place
- U.S. Citizens or corporations within or outside of the U.S. face new challenges: Global Intangible Low-Taxed Income (GILTI)/Subpart F rules OECD/Swiss GAAP FER/IFRS/IAS accounting rules

Source: Deloitte, OECD Pillar Two Guidance <https://blogs.deloitte.ch/tax/2023/02/oecd-releases-pillar-two-administrative-guidance.html>

Persephone GmbH

33

Source: Tax Foundation <https://taxfoundation.org/taxedu/glossary/global-intangible-low-tax-income-gilti/> <https://taxfoundation.org/wp-content/uploads/2023/08/Risks-to-the-U.S.-Tax-Base-from-Pillar-Two.pdf>

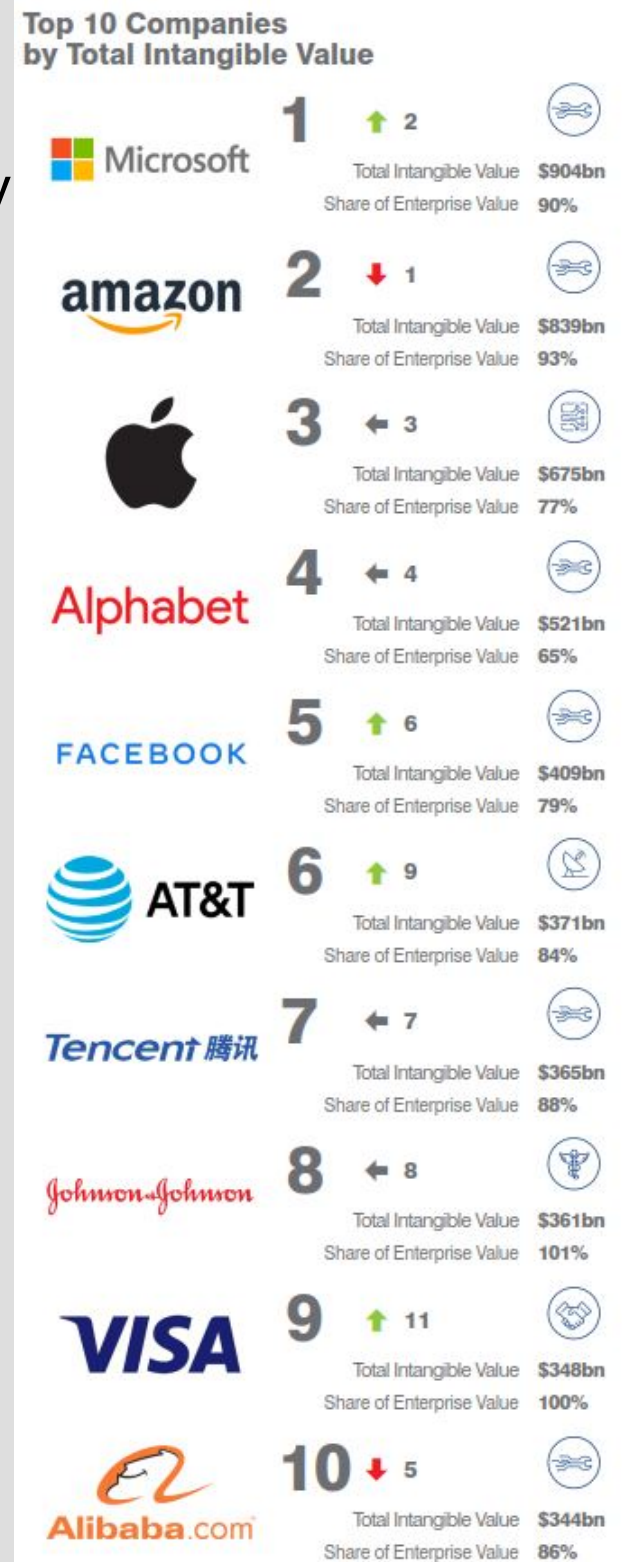
Source: OECD BEPS GloBE rules, <https://www.oecd.org/tax/beps/faqs-on-model-globe-rules.pdf>

8. Knowledge Based Economy

- In a Knowledge Based Economy:
'data is considered by some as the new gold or new oil',
which needs to be protected with IPR

Protecting and securing IPR globally is key for new Economy!

Source: Global Intangible Finance Tracker (GIFT™) 2023 <https://static.brandirectory.com/reports/brand-finance-gift-2023-2.pdf>
 Source: Aon/Ponemon Institute, 2022 Intangible Assets Financial Statement Impact Comparison Report
<https://www.aon.com/getmedia/544c9634-bcb7-4fb3-ad10-82afba01ee49/Aon-Ponemon-2022-Intangible-Assets-Financial-Statement-Impact-Comparison-Report.pdf>



Top 100 Companies by Total Intangible Value.

2019 Rank	2018 Rank		Company	Sector	Total Intangible Value (USD bn)	Total Intangible Value/ Enterprise Value (%)	Tangible Net Asset Value (USD bn)	Net Disclosed Intangibles (USD bn)	Disclosed Goodwill (USD bn)	Undisclosed Intangible Value (USD bn)	Enterprise Value (USD bn)
1	2	↑	Microsoft Corp	Internet & Software	\$904	90%	\$106	\$8	\$36	\$860	\$1,009
2	1	↓	Amazon.com Inc	Internet & Software	\$839	93%	\$65	\$4	\$15	\$820	\$903
3	3	←	Apple Inc	Technology & IT	\$675	77%	\$199	\$0	\$0	\$675	\$874
4	4	←	Alphabet Inc	Internet & Software	\$521	65%	\$279	\$2	\$18	\$501	\$800
5	6	↑	Facebook Inc	Internet & Software	\$409	79%	\$110	\$1	\$18	\$389	\$518
6	9	↑	AT&T Inc	Telecoms	\$371	84%	\$70	\$164	\$146	\$60	\$441
7	7	←	Tencent Holdings Ltd	Internet & Software	\$365	88%	\$52	\$3	\$5	\$357	\$417
8	8	←	Johnson & Johnson	Pharma	\$361	101%	-\$2	\$48	\$30	\$283	\$359
9	11	↑	Visa Inc	Banking	\$348	100%	-\$1	\$28	\$15	\$305	\$348
10	5	↓	Alibaba Group Holding	Internet & Software	\$344	86%	\$56	\$4	\$26	\$314	\$400
11	17	↑	Nestle SA	Food	\$313	89%	\$40	\$19	\$32	\$261	\$353
12	19	↑	The Procter & Gamble Co	Cosmetics & Personal Care	\$305	101%	-\$2	\$24	\$45	\$236	\$303
13	10	↓	Anheuser-Busch InBev	Beers	\$304	99%	\$4	\$45	\$133	\$126	\$308
14	12	↓	Verizon Communications Inc	Telecoms	\$300	83%	\$62	\$104	\$25	\$172	\$363
15	22	↑	Comcast Corp	Media	\$276	92%	\$24	\$98	\$66	\$112	\$300
16	20	↑	Mastercard Inc	Banking	\$259	99%	\$3	\$1	\$3	\$256	\$263
17	29	↑	Novartis AG	Pharma	\$252	101%	-\$3	\$39	\$35	\$178	\$250
18	-	New	Walmart	Retail	\$252	68%	\$119	\$0	\$18	\$234	\$371
19	13	↓	Unitedhealth Group Inc	Healthcare	\$245	94%	\$15	\$9	\$59	\$177	\$260
20	14	↓	Pfizer Inc	Pharma	\$235	98%	\$5	\$35	\$53	\$147	\$241
21	16	↓	Home Depot Inc	Retail	\$230	89%	\$28	\$0	\$2	\$228	\$258
22	27	↑	The Coca-Cola Co	Soft Drinks	\$224	88%	\$32	\$7	\$14	\$203	\$256
23	30	↑	Roche Holding AG	Pharma	\$222	91%	\$22	\$10	\$9	\$204	\$244
24	15	↓	Berkshire Hathaway Inc	Insurance	\$221	34%	\$428	\$38	\$81	\$103	\$649
25	35	↑	Merck & Co Inc	Pharma	\$216	93%	\$16	\$11	\$18	\$186	\$232
26	25	↓	Oracle Corp	Internet & Software	\$208	105%	-\$10	\$7	\$44	\$158	\$198
27	34	↑	Cisco Systems Inc	Technology & IT	\$206	94%	\$13	\$3	\$32	\$172	\$220
28	21	↓	The Boeing Co	Aerospace & Defence	\$203	103%	-\$5	\$3	\$8	\$192	\$197
29	39	↑	The Walt Disney Co	Media	\$197	63%	\$114	\$7	\$31	\$159	\$311
30	32	↑	LVMH	Apparel	\$196	87%	\$29	\$20	\$16	\$160	\$225
31	33	↑	Pepsico Inc	Soft Drinks	\$191	94%	\$12	\$16	\$15	\$160	\$203
32	31	↓	Unilever	Cosmetics & Personal Care	\$178	95%	\$9	\$14	\$20	\$144	\$187
33	47	↑	Mcdonald's Corp	Restaurants	\$170	83%	\$35	\$0	\$2	\$167	\$205
34	18	↓	Intel Corp	Technology & IT	\$169	77%	\$52	\$12	\$25	\$133	\$221
35	26	↓	JPMorgan Chase & Co	Banking	\$168	37%	\$289	\$1	\$47	\$120	\$457
36	41	↑	Charter Communications Inc	Telecoms	\$165	98%	\$3	\$77	\$30	\$59	\$168
37	24	↓	British American Tobacco Plc	Tobacco	\$158	113%	-\$18	\$99	\$59	\$0	\$140
38	52	↑	Abbott Laboratories	Pharma	\$157	96%	\$6	\$19	\$23	\$115	\$164
39	-	New	Noble Vici Group	Technology & IT	\$147	100%	\$0	\$0	\$0	\$147	\$147
40	37	↓	Intl Business Machines Corp	Technology & IT	\$146	97%	\$4	\$3	\$36	\$107	\$151

ry

Top 100 Companies by Disclosed Intangible Value.

economy

2019 Rank	2018 Rank	Company	Sector	Disclosed Intangible Value (USD bn)	Disclosed Intangible Value/Total Intangible Value (%)	Tangible Net Asset Value (USD bn)	Net Disclosed Intangibles (USD bn)	Disclosed Goodwill (USD bn)	Undisclosed Intangible Value (USD bn)	Enterprise Value (USD bn)
1	1	← AT&T Inc	Telecoms	\$310	84%	\$70	\$164	\$146	\$60	\$441
2	2	← Anheuser-Busch InBev	Beers	\$178	59%	\$4	\$45	\$133	\$126	\$308
3	6	↑ Comcast Corp	Media	\$164	59%	\$24	\$98	\$66	\$112	\$300
4	3	↓ British American Tobacco Plc	Tobacco	\$158	100%	-\$18	\$99	\$59	\$0	\$140
5	4	↓ Verizon Communications Inc	Telecoms	\$129	43%	\$62	\$104	\$25	\$172	\$363
6	5	↓ Berkshire Hathaway Inc	Insurance	\$119	54%	\$428	\$38	\$81	\$103	\$649
7	25	↑ CVS Health Corp	Retail	\$115	91%	\$32	\$37	\$79	\$11	\$158
8	7	↓ Charter Communications Inc	Telecoms	\$106	64%	\$3	\$77	\$30	\$59	\$168
9	12	↑ Softbank Group Corp	Telecoms	\$104	73%	\$79	\$64	\$41	\$38	\$221
10	9	↓ Allergan Plc	Pharma	\$90	109%	-\$9	\$44	\$46	-\$7	\$74
11	8	↓ Pfizer Inc	Pharma	\$89	38%	\$5	\$35	\$53	\$147	\$241
12	10	↓ The Kraft Heinz Co	Food	\$86	118%	-\$4	\$49	\$37	-\$13	\$69
13	65	↑ Bayer AG	Pharma	\$86	92%	\$9	\$42	\$44	\$8	\$103
14	-	New Cigna	Healthcare	\$84	84%	-\$5	\$39	\$45	\$16	\$95
15	14	↓ Johnson & Johnson	Pharma	\$78	22%	-\$2	\$48	\$30	\$283	\$359
16	11	↓ General Electric Co	Engineering & Construction	\$78	62%	\$23	\$18	\$60	\$48	\$149
17	-	New Sanofi	Pharma	\$76	67%	\$11	\$25	\$51	\$37	\$124
18	37	↑ United Technologies Corp	Aerospace & Defence	\$75	52%	\$10	\$26	\$48	\$68	\$152
19	16	↓ Deutsche Telekom AG	Telecoms	\$74	62%	\$58	\$60	\$14	\$46	\$178
20	21	↑ Novartis AG	Pharma	\$74	29%	-\$3	\$39	\$35	\$178	\$250
21	15	↓ Volkswagen AG	Automobiles	\$74	197%	\$250	\$47	\$27	-\$36	\$288
22	17	↓ Bank of America Corp	Banking	\$71	83%	\$282	\$2	\$69	\$15	\$367
23	18	↓ The Procter & Gamble Co	Cosmetics & Personal Care	\$69	23%	-\$2	\$24	\$45	\$236	\$303
24	19	↓ Unitedhealth Group Inc	Healthcare	\$68	28%	\$15	\$9	\$59	\$177	\$260
25	-	New Dell Technologies Inc	Technology & IT	\$68	62%	-\$22	\$28	\$40	\$41	\$87
26	61	↑ Atlatia SpA	Commercial Services	\$66	85%	-\$2	\$42	\$24	\$12	\$76
27	20	↓ Medtronic Plc	Healthcare	\$61	42%	\$4	\$22	\$40	\$83	\$149
28	-	New CK Hutchison Holdings	Retail	\$61	160%	\$53	\$20	\$41	-\$23	\$91
29	30	↑ Vodafone Group Plc	Telecoms	\$53	171%	\$47	\$20	\$33	-\$22	\$79
30	26	↓ Nestle SA	Food	\$51	16%	\$40	\$19	\$32	\$261	\$353
31	27	↓ Oracle Corp	Internet & Software	\$50	24%	-\$10	\$7	\$44	\$158	\$198
32	28	↓ Sprint Corp	Telecoms	\$50	98%	\$16	\$44	\$7	\$1	\$68
33	23	↓ Telefonica Sa	Telecoms	\$49	65%	\$42	\$19	\$29	\$26	\$117
34	31	↓ JPMorgan Chase & Co	Banking	\$48	29%	\$289	\$1	\$47	\$120	\$457
35	29	↓ Orange	Telecoms	\$47	80%	\$24	\$16	\$31	\$12	\$83
36	33	↓ Siemens AG	Engineering & Construction	\$45	56%	\$32	\$12	\$33	\$35	\$112
37	-	New Keurig Dr Pepper	Soft Drinks	\$44	73%	-\$5	\$24	\$20	\$17	\$55
38	35	↓ Microsoft Corp	Internet & Software	\$44	5%	\$106	\$8	\$36	\$860	\$1,009
39	-	New Linde	Chemicals	\$43	45%	\$21	\$16	\$27	\$53	\$117
40	41	↑ Vinci Sa	Engineering & Construction	\$43	52%	\$11	\$32	\$11	\$39	\$93
41	40	↓ Visa Inc	Banking	\$43	12%	-\$1	\$28	\$15	\$305	\$348
42	34	↓ Abbott Laboratories	Pharma	\$42	27%	\$6	\$19	\$23	\$115	\$164
43	36	↓ Telecom Italia SpA	Telecoms	\$41	138%	\$19	\$10	\$31	-\$11	\$49
44	42	↓ Thermo Fisher Scientific Inc	Healthcare	\$40	34%	\$6	\$15	\$25	\$79	\$125

1. Valuation: What are my intangible assets worth?

Valuations may be conducted for technical purposes and to set a baseline against which potential strategic brand scenarios can be evaluated.

- + Branded Business Valuation
- + Trademark Valuation
- + Intangible Asset Valuation
- + Brand Contribution

2. Analytics: How can I improve marketing effectiveness?

Analytical services help to uncover drivers of demand and insights. Identifying the factors which drive consumer behaviour allows an understanding of how brands create bottom-line impact.

- Market Research Analytics +
- Return on Marketing Investment +
- Brand Audits +
- Brand Scorecard Tracking +

4. Transactions: Is it a good deal? Can I leverage my intangible assets?

Transaction services help buyers, sellers, and owners of branded businesses get a better deal by leveraging the value of their intangibles.

- + M&A Due Diligence
- + Franchising & Licensing
- + Tax & Transfer Pricing
- + Expert Witness

3. Strategy: How can I increase the value of my branded business?

Strategic marketing services enable brands to be leveraged to grow businesses. Scenario modelling will identify the best opportunities, ensuring resources are allocated to those activities which have the most impact on brand and business value.

- Brand Governance +
- Brand Architecture & Portfolio Management +
- Brand Transition +
- Brand Positioning & Extension +



MARKETING

We help marketers to connect their brands to business performance by evaluating the return on investment (ROI) of brand-based decisions and strategies.



FINANCE

We provide financiers and auditors with an independent assessment on all forms of brand and intangible asset valuations.



TAX

We help brand owners and fiscal authorities to understand the implications of different tax, transfer pricing, and brand ownership arrangements.



LEGAL

We help clients to enforce and exploit their intellectual property rights by providing independent expert advice in- and outside of the courtroom.

8. Knowledge Based Economy

Following are some of the key takeaways from this research.

Companies value information assets slightly higher than they do PP&E⁷⁵. The average total value of PP&E is approximately \$1,109 million for the companies represented in this research. The average total value of information assets is slightly higher at **\$1,213 million**.

The value of Probable Maximum Loss (“PML”)⁷⁶ is higher for information assets than for PP&E. Companies estimate the average PML resulting from stolen or destroyed information at approximately **\$1,152 million**. In contrast, the average value of the largest loss that could result from damage or total destruction of PP&E is approximately **\$839 million**. Business disruption has a greater impact on information assets (**\$321 million**)⁷⁷ than on PP&E (**\$143 million**).

Insurance coverage is higher for PP&E than for information assets. On average, approximately 58 percent of PP&E assets are covered by insurance and approximately **30 percent** of PP&E assets are self-insured.⁷⁸ While the likelihood of a loss is higher for

8. Knowledge Based Economy

Risks to Intellectual Property (IP)⁹⁴

Intellectual Property Insurance: Scope and Gaps

Exposures	Intellectual Property Liability	General Liability	E&O/ Professional Liability	Cyber Liability	Media Liability	Kidnap and Ransom	Reps and Warranties (Transaction Based)
IP Liability Risks							
Patent Infringement	Cover available	Excluded	Excluded	Excluded	Excluded	Excluded	Cover for the Rep on past issues, no go-forward
Trade Secret Misappropriation	Cover available, outside the scope of some core policies	Excluded	Excluded	Excluded	Excluded	Excluded	Cover for the Rep on past issues, no go-forward
Trademark/Trade Dress/Trade Name Infringement	Cover available	Limited to Advertising Injury, Products and Services Excluded	Limited to Advertising Injury tied to the Performance of Professional Services	Content disseminated through the website or internet	Limited to Content	Excluded	Cover for the Rep on past issues, no go-forward
Copyright Infringement	Cover available	Limited to Advertising Injury, Products and Services Excluded	Limited to Advertising Injury tied to Professional Services	Content disseminated through the website or internet	Limited to Content	Excluded	Cover for the Rep on past issues, no go-forward
Third Party IP disclosure/release (breach of NDA/confidentiality agreement)	Cover can be endorsed for unintentional acts	Excluded	Limited to Professional Services for unintentional acts	Cover for unintentional breach of NDA, under Security & Privacy Liability	Unintentional disclosure of private facts	Excluded	Cover for the Rep on past issues, no go-forward
Contractual Indemnities of IP Risk	Cover available for IP Infringement of Insured's Product	Excluded	Limited to Advertising Injury tied to Professional Services	Limited to Content disseminated through website or internet	Limited to Content	Excluded	Cover for the Rep on past issues, no go-forward
Breach of IP license agreement	Can be endorsed, limited availability	Excluded	Excluded	Excluded	Unintentional breach of a license	Excluded	Cover for the Rep on past issues, no go-forward
IP Ownership Risks							
IP ownership representations	Cover available	Excluded	Excluded	Excluded	Excluded	Excluded	Cover for the Rep on past issues, no go-forward
Loss of IP value due to theft/misappropriation/other loss	Solutions being built	Excluded	Excluded	Excluded	Excluded	Excluded	Cover for the Rep on past issues, no go-forward
IP Enforcement costs	Limited availability, only outside of the U.S.	Excluded	Excluded	Excluded	Excluded	Excluded	Cover for the Rep on past issues, no go-forward
Loss of IP due to legal challenge/Loss of Revenue	Limited availability	Excluded	Excluded	Excluded	Excluded	Excluded	Cover for the Rep on past issues, no go-forward

⁹⁴ Only 19% of companies report that their patent portfolios are the right size – one of four key findings discovered in the Cipher report

[Cipher](#)

9. Closing Remarks

Navigating you and your clients with professional experience since 2007 in Foundation/Trust deed administration/Software-Engineering/Securities Accounting/Group Accounting/Financial Reporting/Consulting/Project Management for SME and MNCs

=> Christian Günther, MSc., Founder and CEO

PERSEPHONE

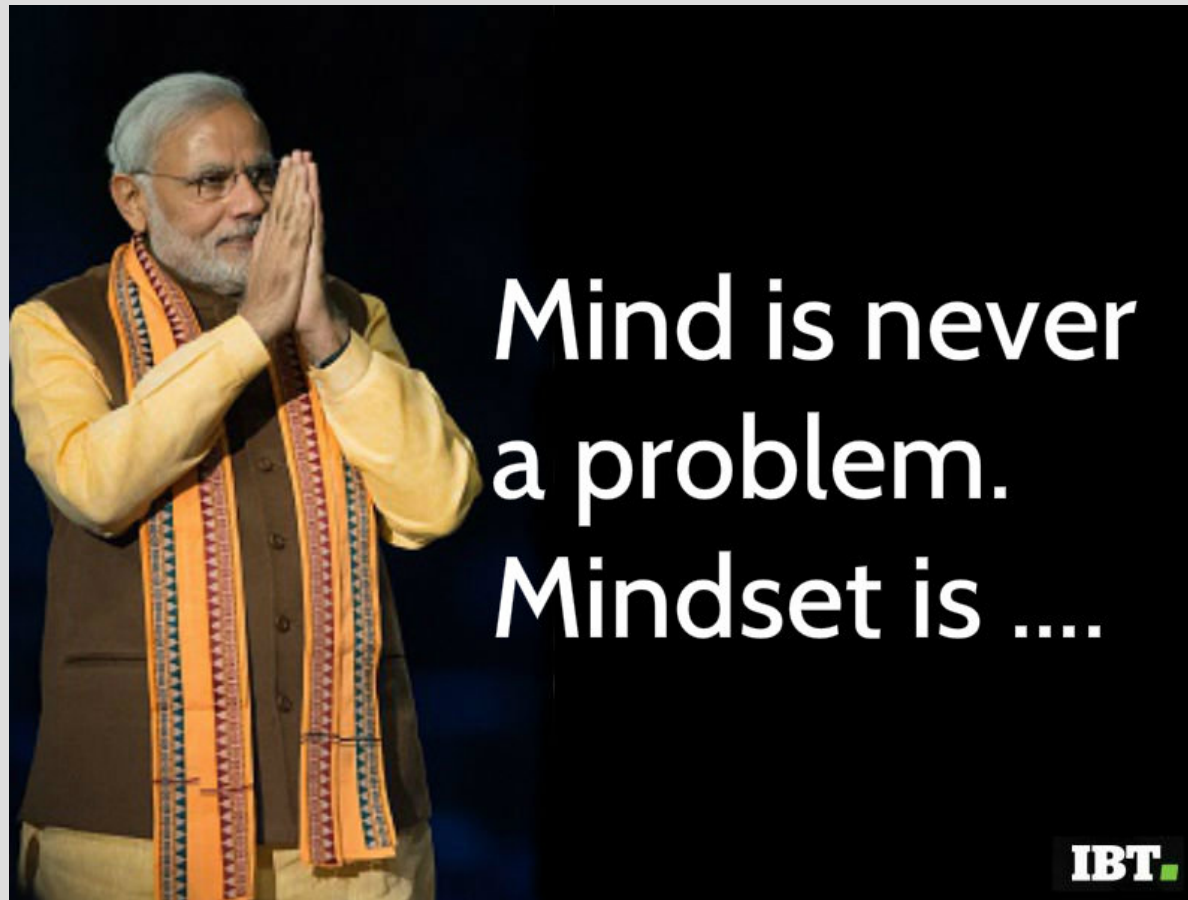
Persephone GmbH
St.Johanns-Ring 79
CH-4056 Basel
Switzerland

Tel: +41 78 697 0180

Email: christian.guenther@gmx.ch

References (additional/continued)

- Vaish Associates: Protection of Trade Secret in India: <https://www.lexology.com/library/detail.aspx?l=4023531b-10a4-4b63-a0fe-b7d3a10deb7de---text%20Trade%20Secret%20Law%20in%20India,the%20parties%20e.%2C%20NonDisclosure%20Agreements>.
- AZB & Partners: Trade Secrets: India <https://www.azbpartners.com/bank/trade-secrets-india/#---text%20There%20is%20no%20statute%20or%20action%20for%20breach%20of%20confidenc>.
- FTC Antitrust and Intellectual Property <https://www.ftc.gov/news-events/news/speeches/antitrust-intellectual-property-law-adversaries-partners>
- WIPO Overview IP Rights: https://www.wipo.int/edocs/mdocs/aspac/en/wipo_ip_unh_11/wipo_ip_unh_11_ref_14.pdf
- World Bank GMT: <https://openknowledge.worldbank.org/entities/publication/467fc434-f03b-5859-a456-1ea07571ddd3>
- Kluwer Pillar 2 QDMTT or SHDMTT: https://kluwertaxblog.com/2023/11/02/pillar-2-qdmtt-or-safe-harbour-domestic-minimum-top-up-tax-shdmtt/#_ftn14
- pwc Pillar Two Country Tracker: <https://www.pwc.com/gx/en/tax/international-tax-planning/pillar-two/pwc-pillar-two-tracker-full-data-v2.pdf>
- OECD Global Anti-Base Erosion Model Rules (Pillar Two): <https://www.oecd.org/tax/beps/fags-on-model-globe-rules.pdf>
- Tax Foundation: Risks to the U.S. Tax Base from Pillar Two: Subpart F rules OECD <https://taxfoundation.org/research/all/federal/global-minimum-tax-us-tax-base---anti-conduit-subpart-f-rules-us-2023.html#tax.coming---text%20these%20types%20of%20income>
- Brand Finance Global Intangible Finance Tracker (GIFT™) 2019 https://brandfinance.com/wp-content/uploads/1/gift_2.pdf
- Brand Finance Global Intangible Finance Tracker (GIFT™) 2023 <https://static.brandfactory.com/reports/brand-finance-gift-2023-2.pdf>
- WIPO Global Innovation Index 2023 <https://www.wipo.int/edocs/pubdocs/en/wipo-pub-2000-2023-en-main-report-global-innovation-index-2023-16th-edition.pdf>



Source: <https://www.ibtimes.co.in/photos/happy-birthday-narendra-modi-top-10-powerful-quotes-by-pm-modi-18114-slide-99504>