

ARIAD Patent Equity Strategy Profit from Intellectual Property AENT



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Executive Summary

Intellectual Property

√ Relevance

- Intangible assets account for the majority (>80%) of the market capitalisation of S&P500 companies
- Patent applications tripled in the last 3 decades
- Products becoming more complex, building upon many patents
- Licensing income from patents becoming more important

Scientifically Validated Connection to Company Success

- Patents protect innovations
- Patents increase: company value

revenue

overall profitability

Patent Data Processing

- Standardised, but complex patent information on various complex processes as a basis
- Is made usable from a database technical point of view (prepared, cleaned and correctly assigned)
- Calculation of scientifically based patent indicators
- The ARIAD company universe is made smaller by means of filter processes
- Universe basis:

company (mkt. cap. > €200 million) from "MSCI Developed Countries"

Outperformance from micro, small & mid cap "hidden champions"

- Main sectors: industry, health/pharmaceuticals and technology
- Many candidates for inclusion "identified" at an early stage

Since the start of 2015, the ARIAD Patent Equity Strategy has also been very successfully implemented in a **mutual fund**.

Background & the Strategy

Put the future in your portfolio - today

PATENT LICENSE AGREEMENT This patent license agreement (hereinafter referred to as the "AGREEMENT"), is made and entered into by and between

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Intellectual Property as Indicator

What do these 37 companies have in common?



































AEROSPACE





















Immunomedics





















1. Takeover candidates

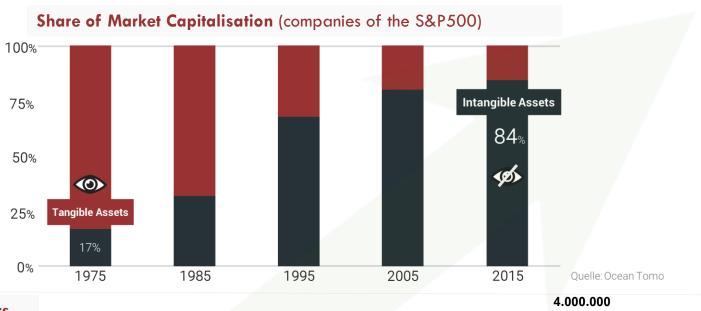


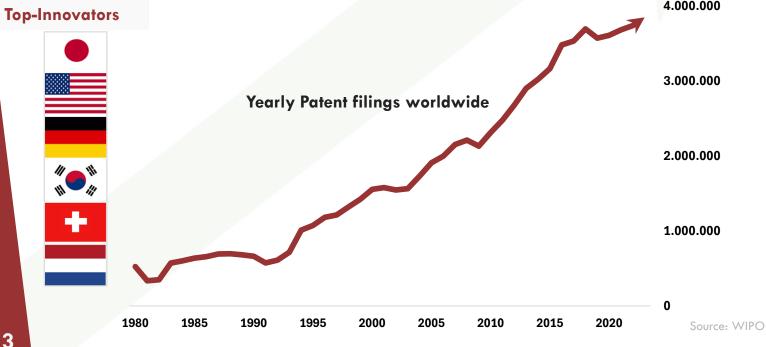
2. Technological sector leaders Leadership protected by patents



3. In our portfolio before takeover

ntellectual Property is highly relevant





Reasons for the growing relevance

1. Complexe products

... based on many patents.

2. Emerging economies

... in eastern Asia are seeking industrial property rights.

3. Patent infringement suits

... in recent years ensure a more effective use of industrial property rights.

4. Licensing income

...is becoming increasingly important.

Company IBM:

- 1990: **USD 30 million**
- 2017: **USD 1,193** million

atents protect Innovations

... and have a scientifically validated.

positive influence on a company's success.



Corporate Success

- 3) Return on investment
- 2) Revenue growth
- 1) Increasing
 Company value



Patents (+ their management)

Protecting intellectual capital



Scientific confirmation

- 1) Tobin (1969); Wernerfelt u. Montgomery (1988); Lang und Stolz (1994); Bosworth u. Rogers (2001), Lee u. Grewal (2004); ...
- 2) Powell u. Dent-Micallef (1997); Spanos u. Lioukas (2001); Baum u. Wally (2003); Wiklund u. Shepherd (2003); Desarbo et al. (2005); ...
- 3) Penner-Han u. Shaver (1995); Baum u. Wally (2003); De Carolis (2003); Tanriverdi u. Venkatraman (2005); ...

... also of the ARIAD patent approach!



Prof. Dr. Houdou Basse Mama ESCP Europe (Berlin Campus)

"Innovative efficiency and stock returns: Should we care about nonlinearity?" – Finance Research Letters (2017)



Close cooperation

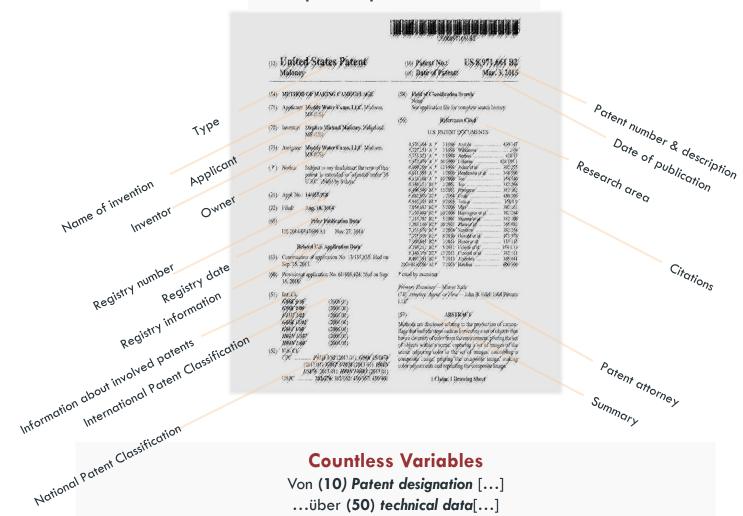


ARIAD patent approach & data ... scientifically verified

www.patents.can be analysed

Patent specifications

... offer standardised, complete & up-to-date information



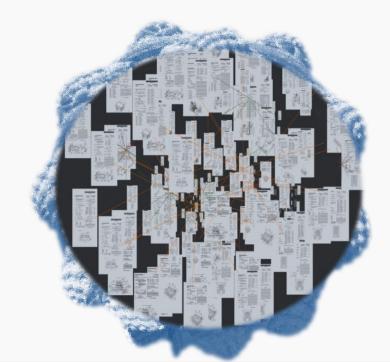
...über (50) technical data[...] ... bis (98) [...] application-date for the extension of the duration [...]

Big-Data Chaos

Patents are practically never stand-alone. They form a network of forward and backward citations, contradictions and superior patent families.

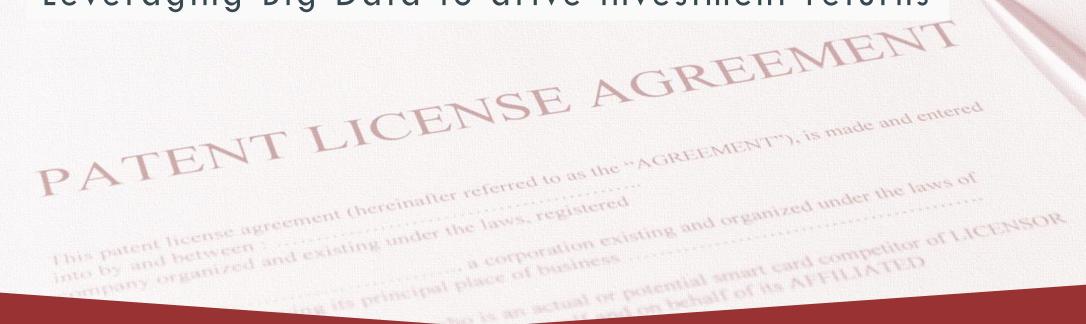
In combination with the countless variables of a single patent specification, this results in a jumble of information: Big Data Chaos.

The challenge is to make this information usable.

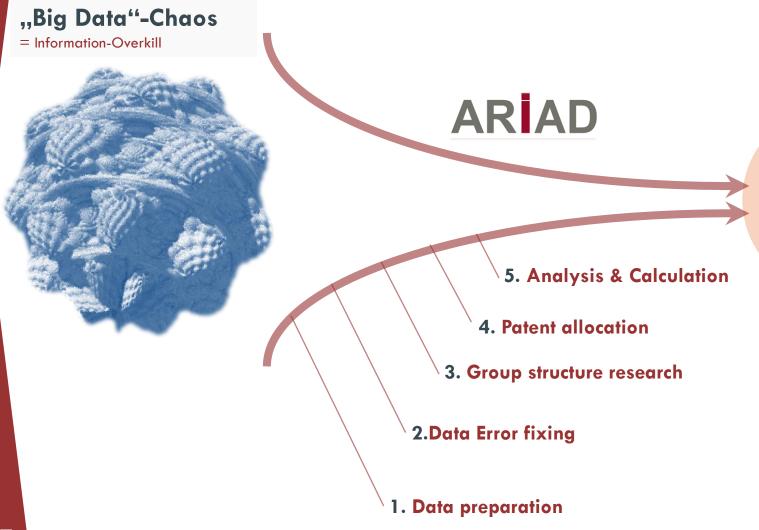


From Patents to the Patent Equity Strategy

Leveraging Big Data to drive investment returns



Making Patent Information usable



From patent data to patent indicators

Using various complex **processes** (1.-5.) the patent information is made usable from a technical database point of view, prepared, cleaned and correctly assigned. Here, the **Group Structure Research** in particular is very time-consuming, since, for example, Siemens alone has more than 600 different subsidiaries with patents.

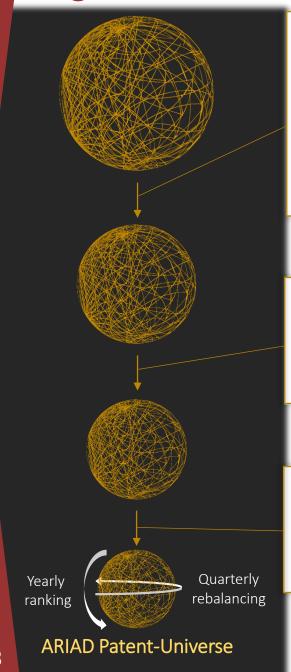
On the basis of the prepared data, **indicators are then calculated** that have a proven correlation to the value of patents.

Indicators

- Citations
- > Terms
- Patent Extents
- > Patent Families
- >

Stock Selection

he global ARIAD Patent-Universe



#1: *Industrialized Countries*

+according to the definition of MSCI + additional filter (freefloat, marketcap)



#2: Sectors with high patent activity



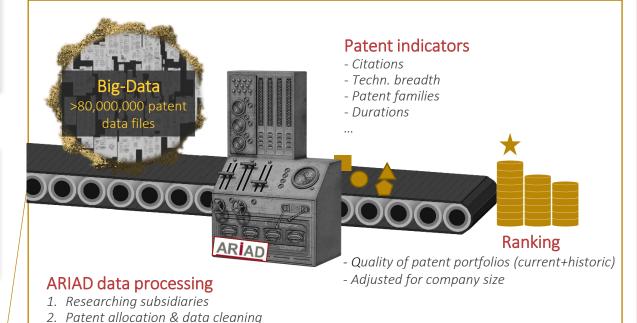




Raw Materials

#3: Patent portfolio-ranking

- ✓ Most innovative companies
- ✓ Mainly micro-, small- und midcap
- ✓ Focus: **USA**, **Japan**, **Europe**



#4: Selection process

- ✓ Investment in **about 100 companies with highest ranking**
- ✓ Consideration of **fundamental** and **technical data**
- ✓ No orientation on any benchmark

3. Computation of patent indicators



he Strategy at a Glance

- Companies with a high-quality patent portfolio receive investment. (mainly small/midcaps)
- Positive side effect: above-average number of candidates for takeover in the portfolio - before takeover offers are known on the market.
- Regionally, the investments concentrate on USA and Japan/Pacific alongside the main focus of Europe.
- The main focus of the selection process is the systematic quality evaluation of the patent portfolio using many scientifically validated indicators. This patent license agreement theremalter referred to as the

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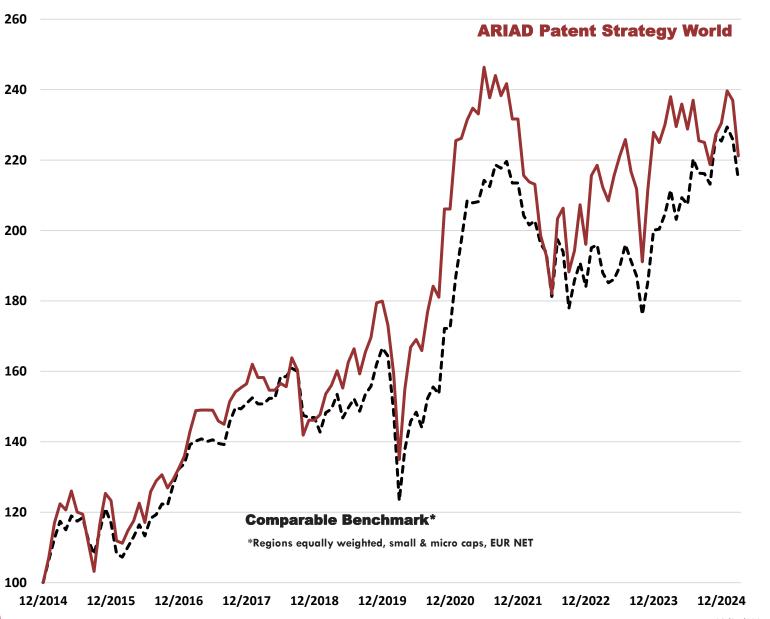
- The selection of regions and sectors is determined by the quality of the patent portfolio.
- High degree of diversification. (approx. 100 titles in the portfolio)
- Items are held in the medium to long term.
- Adaptation according to ranking
 - "Opportunistic" transactions possible during the year
 - No currency hedging

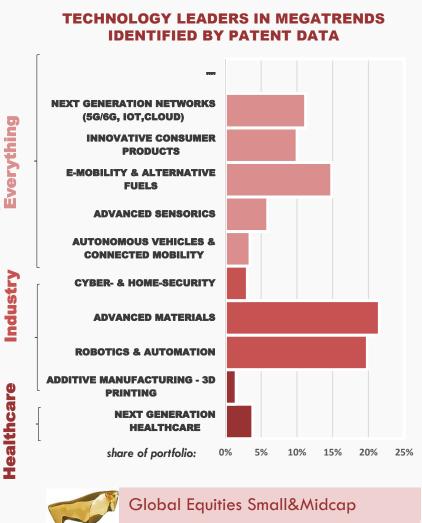


Results of the Strategy:

Outperformance, especially by small & mid cap stocks

Performance of the "World" Patent Strategy: Multiple Track Records Prove the Added Value







BÖRSE

Digitalization

Smart

NextGen

rank 1: 1-year performance

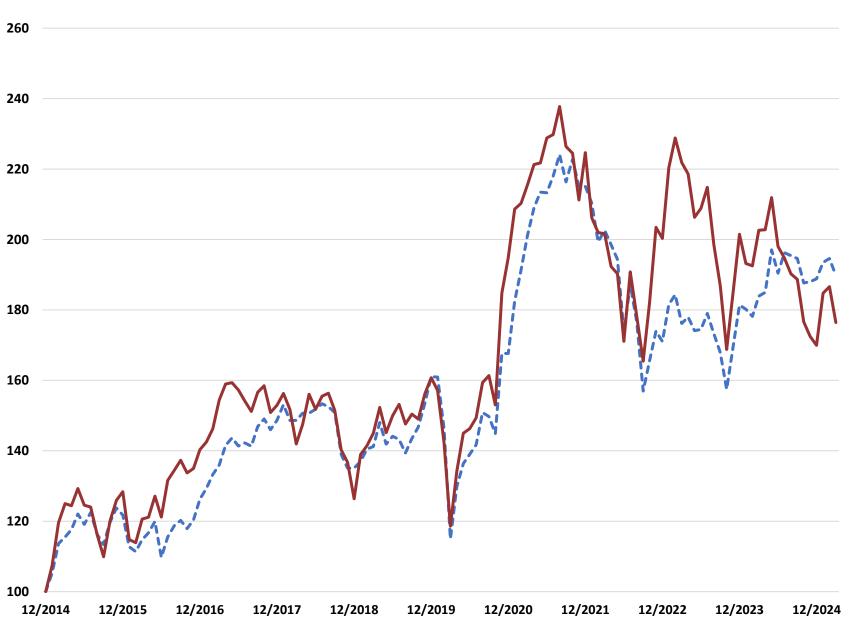
rank 2: 3-year performance

rank 2: 5-year performance

Awarded to the Monega ARIAD Innovation R that is

based on ARIADs Patent Strategy

Region Europe



Main Sector - Industry

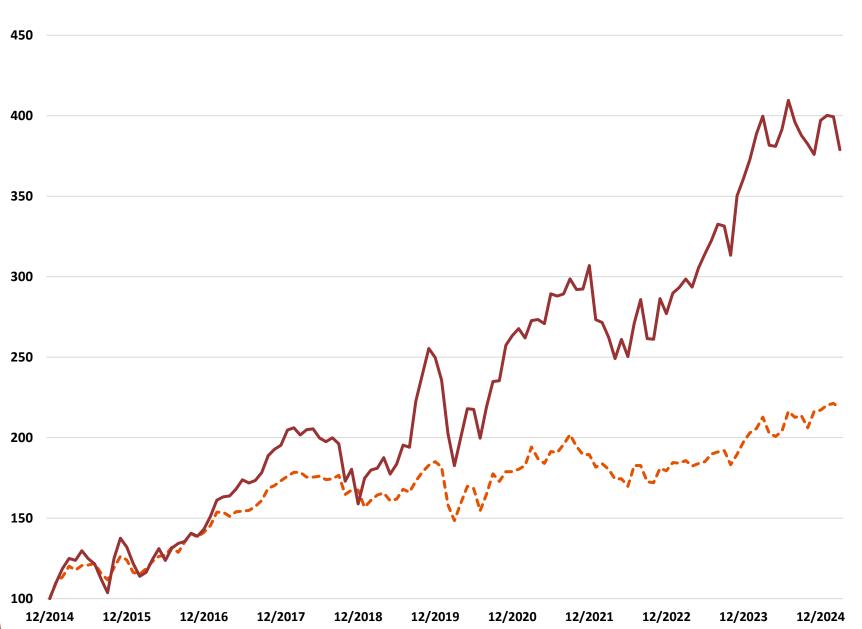


ARIAD Patent Strategy Europe (Carve-Out)

Comparable Benchmark*

*Europe, small & micro caps, EUR NET

Region Japan/Pacific



Main Sector - Industry

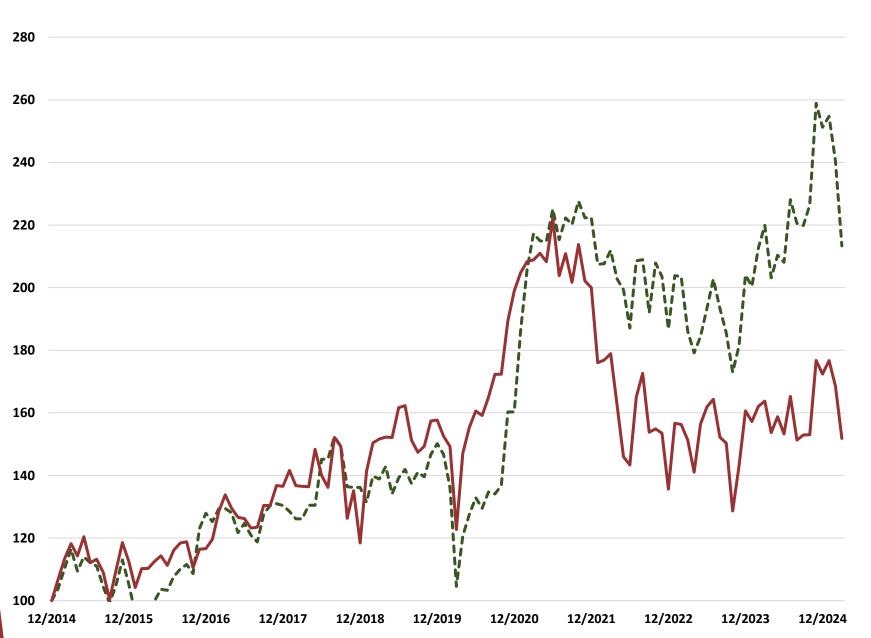


ARIAD Patent Strategy Japan (Carve-Out)

Comparable Benchmark*

*Japan, small & micro caps, EUR NET

Region North America



Main Sector - Biotech & Tech

Comparable Benchmark*

*USA, small & micro caps, EUR NET

ARIAD Patent Strategy North America (Carve-Out)

Eurther Information

The ARIAD Patent Equity Strategy: has been fully implemented in a **mutual fund** since 2015:

Monega ARIAD Innovation (WKN 532102) www.monega.de

As an institutional investor you can **register for a monthly update** on the strategy at <u>www.ariad.de</u>.



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