

ARIAD

ASSET MANAGEMENT

ARIAD Patent Equity Strategy Profit from Intellectual Property



Background of the Strategy

- Intellectual property as an indicator p.2
- Intellectual property is highly relevant p.3
- Patents and their influence on company success p.4
- How patents can be analysed p.5

From Patents to the Patent Equity Strategy

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- Performance of the „Japan/Pacific“ region p.15
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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“

- Clear outperformance in the Europe and Japan/Pacific regions
- 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 :

..... a corporation existing and organized under the laws of its principal place of business

..... is an actual or potential smart card competitor of LICENSOR and on behalf of its AFFILIATED

Intellectual Property as Indicator

What do these 37 companies have in **common**?



1. Takeover candidates



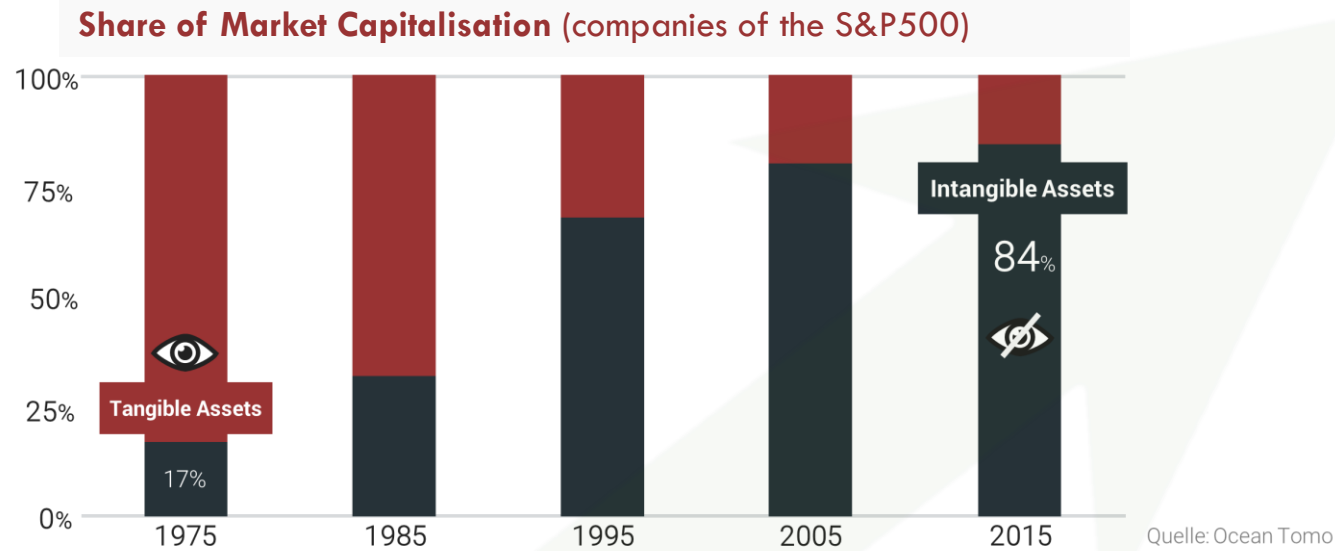
2. Technological sector leaders

Leadership protected by **patents**



3. In our portfolio before takeover

Intellectual Property is highly relevant



Reasons for the growing relevance

1. Complex 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.

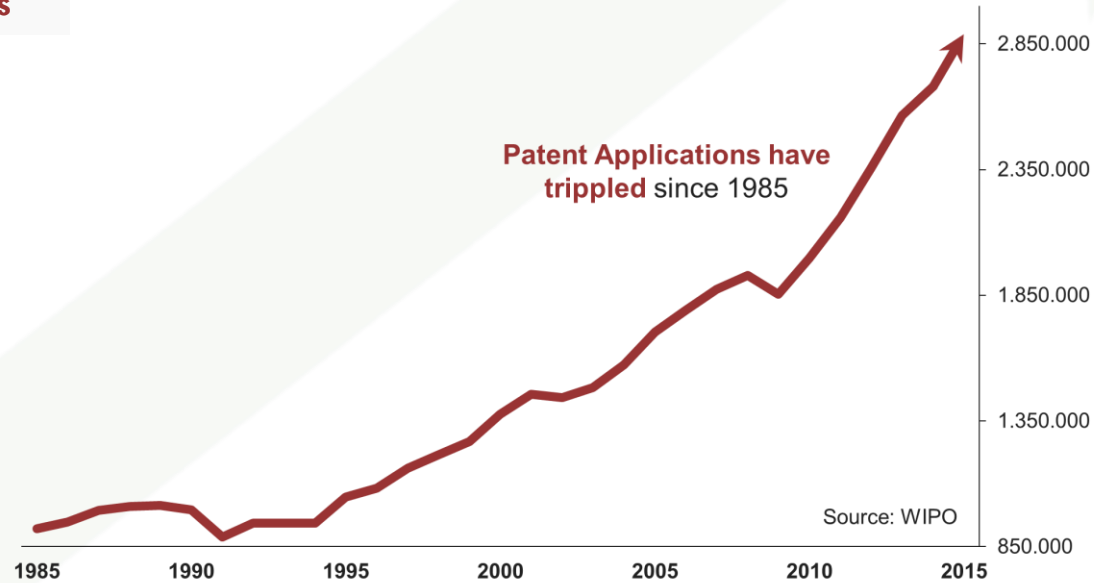
4. Licensing income

... is becoming increasingly important.

Company IBM:

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

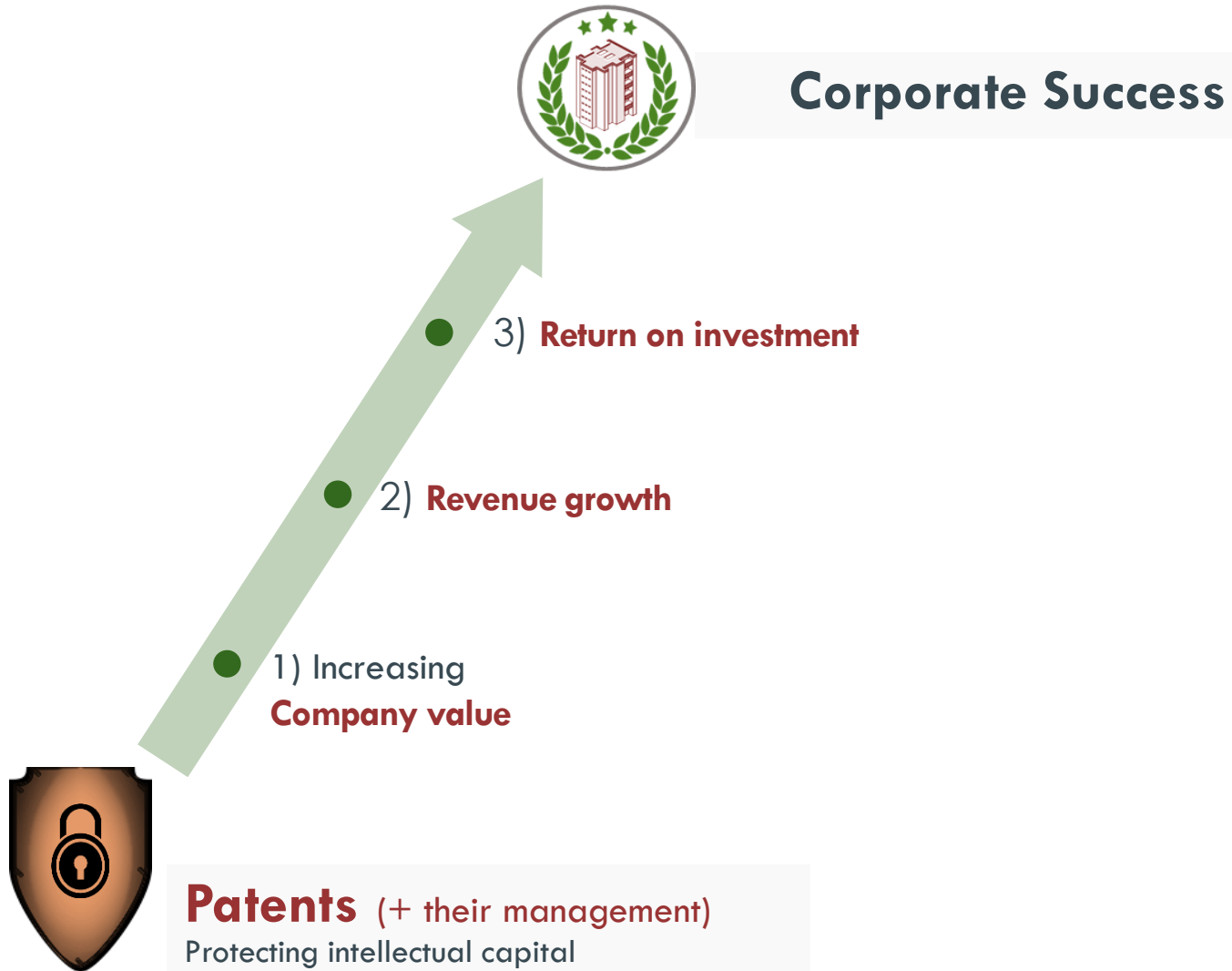
Top-Innovators



Patents protect Innovations

... and have a scientifically validated.

positive influence on a company's success.



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

5

... bis (98) [...] *application-date for the extension of the duration* [...]

From Patents to the Patent Equity Strategy

Leveraging Big Data to drive investment returns

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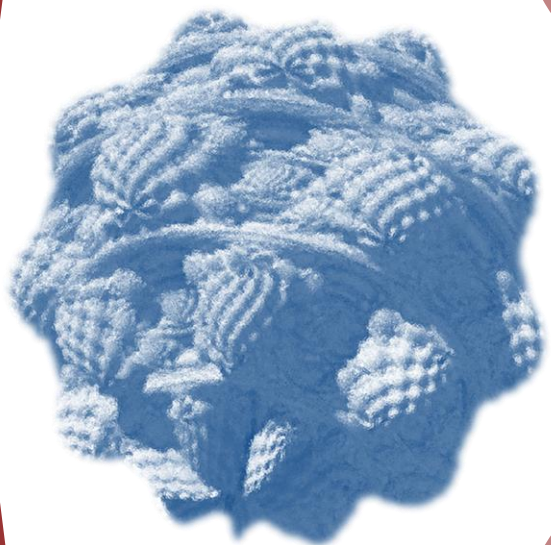
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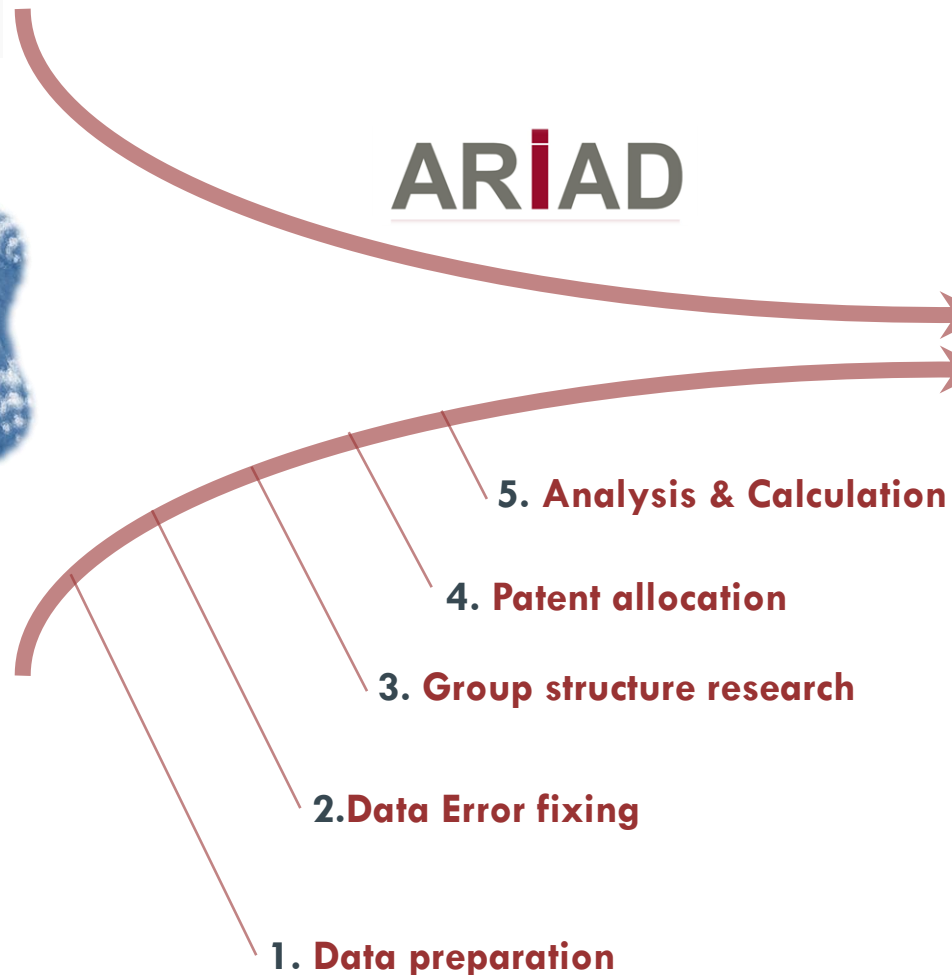
Making Patent Information usable

„Big Data“-Chaos

= Information-Overkill



ARIAD



Indicators

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

Stock Selection

From patent data to patent indicators

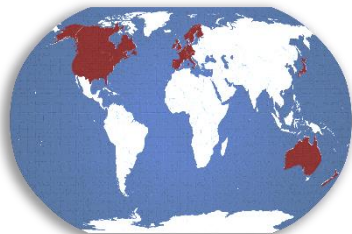
Using various complex **processes** (1.-5.) the patent information is made usable from a technical database point of view, prepared, cleaned and correctly assigned. Here, the **Group Structure Research** in particular is very time-consuming, since, for example, Siemens alone has more than 600 different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

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

The global ARIAD Patent-Universe

#1: Industrialized Countries

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



#2: Sectors with high patent activity



Utilities



Logistics



Raw Materials

#3: Patent portfolio-ranking

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

Yearly
ranking

Quarterly
rebalancing

ARIAD Patent-Universe

Big-Data

>80,000,000 patent
data files

Patent indicators

- Citations
- Techn. breadth
- Patent families
- Durations
- ...



Ranking

- Quality of patent portfolios (current+historic)
- Adjusted for company size

ARIAD data processing

1. Researching subsidiaries
2. Patent allocation & data cleaning
3. Computation of patent indicators

#4: Selection process

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



The 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.
- 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

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..... the "Parties".



Results of the Strategy:

Outperformance, especially by small & mid cap stocks

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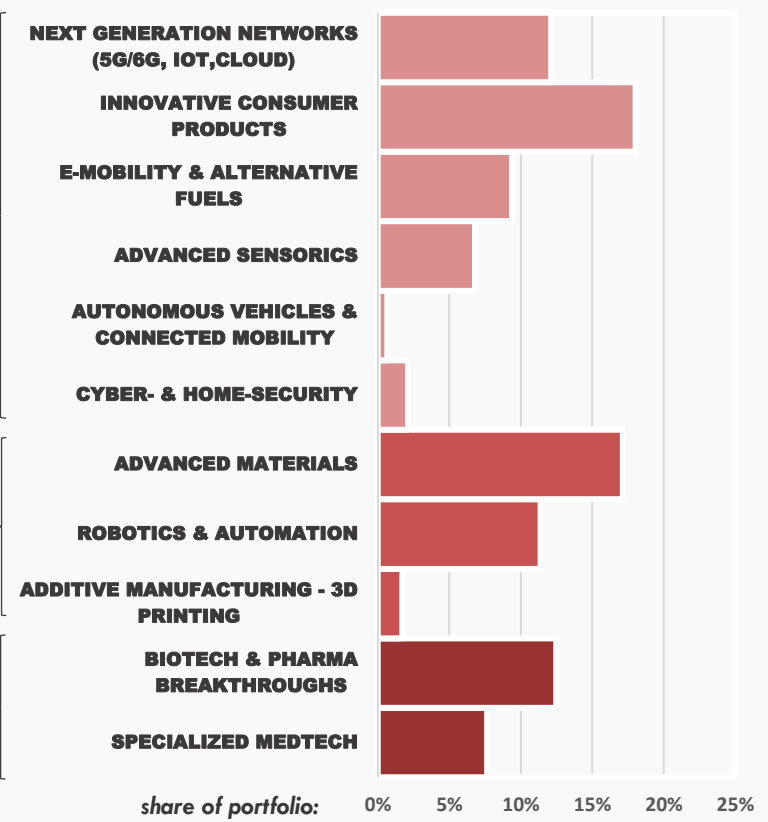
Performance of the „World“ Patent Strategy: Multiple Track Records Prove the Added Value



Quelle: ARIAD - Updated 04/28/23

TECHNOLOGY LEADERS IN MEGATRENDS IDENTIFIED BY PATENT DATA

Digitalization of Everything
Smart Industry
NextGen Healthcare



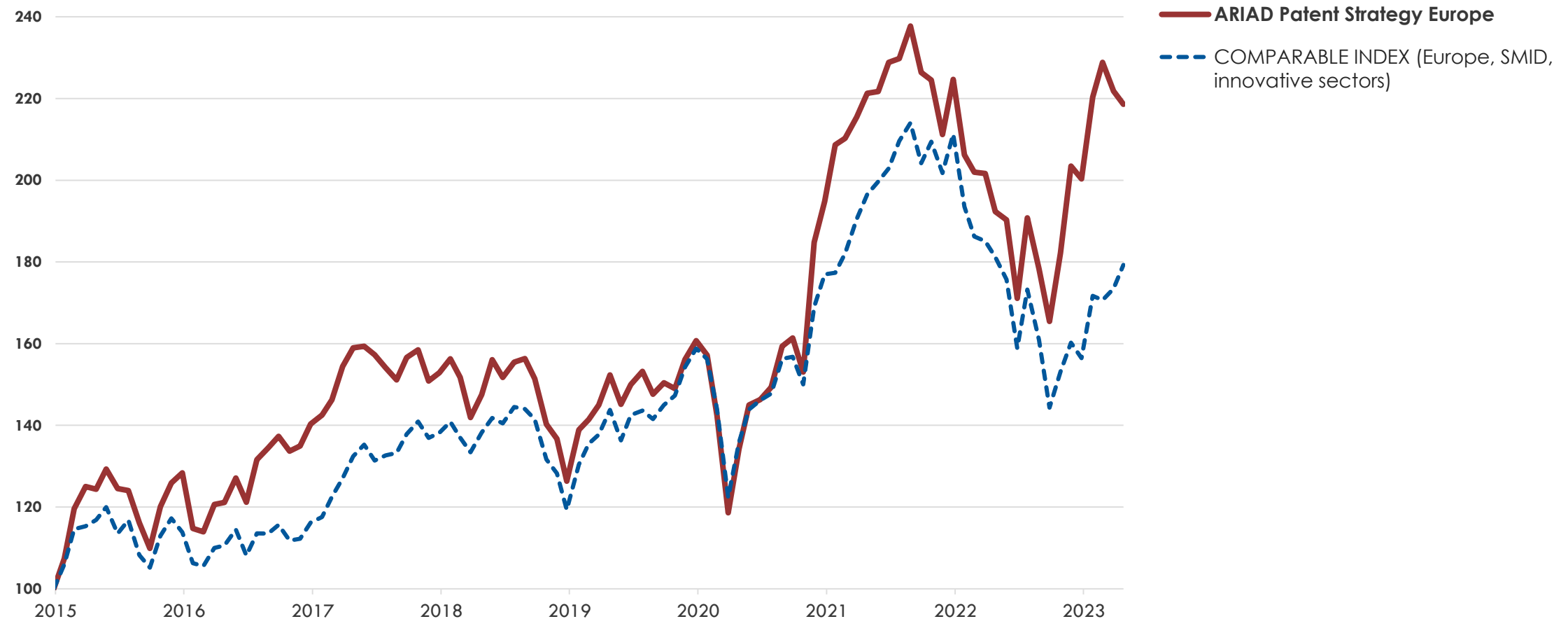
Quelle: ARIAD - Updated 04/28/23



Global Equities Small&Midcap
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

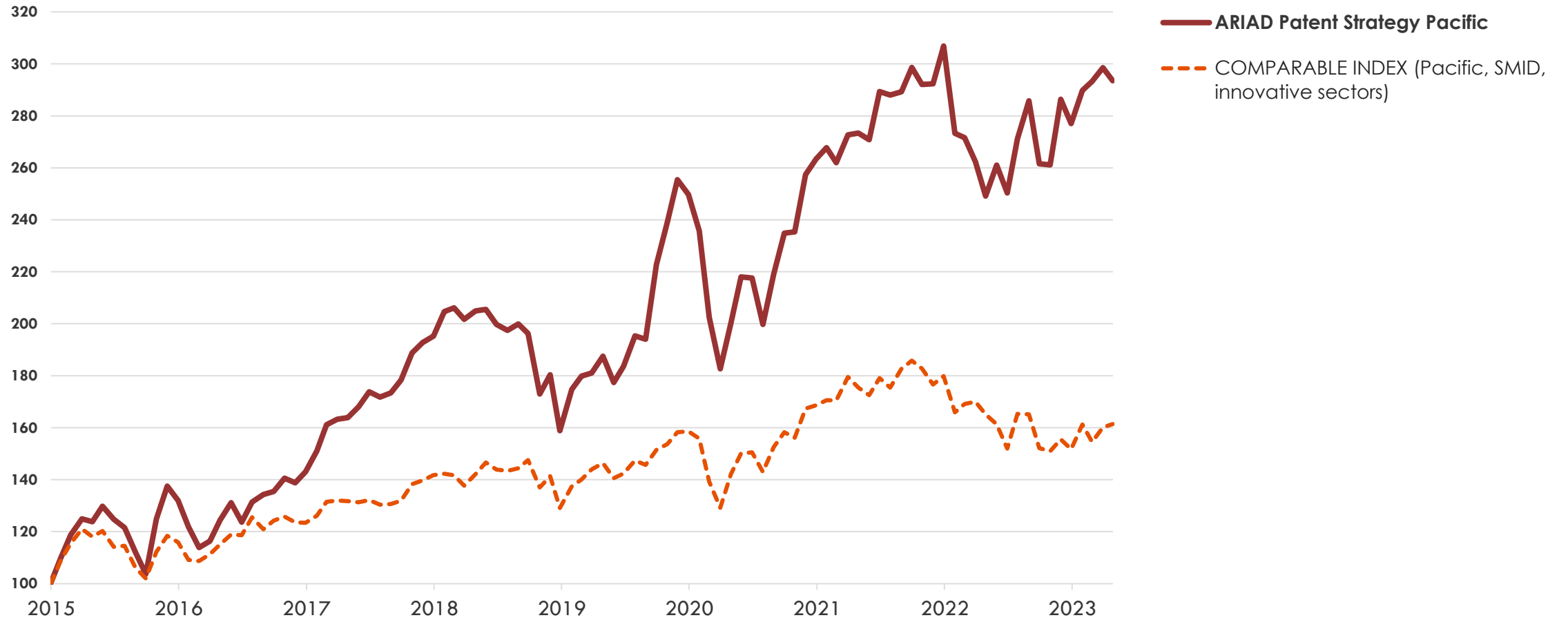


Main Sector - Industry



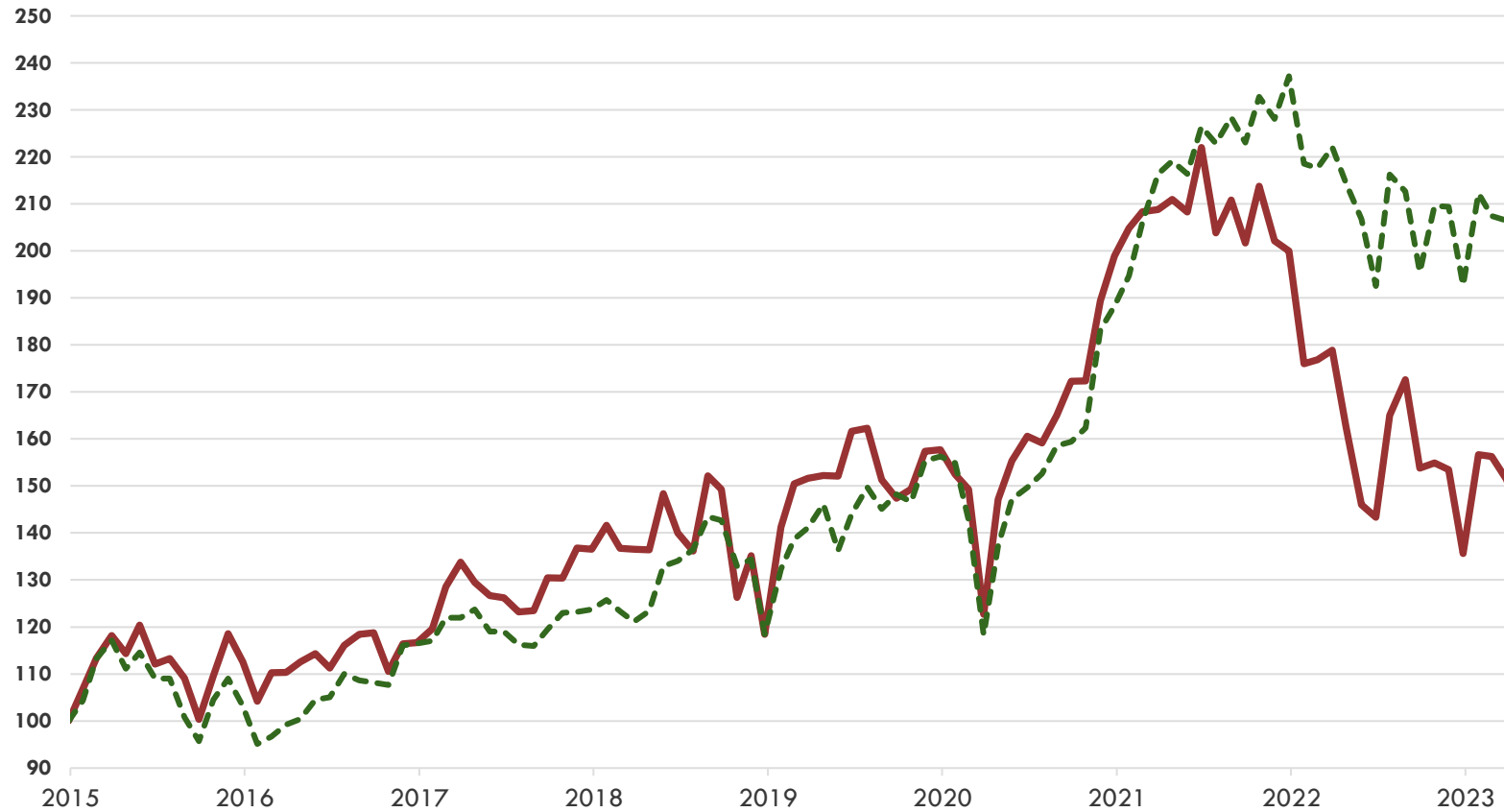


Main Sector - Industry





Main Sector - Health Care



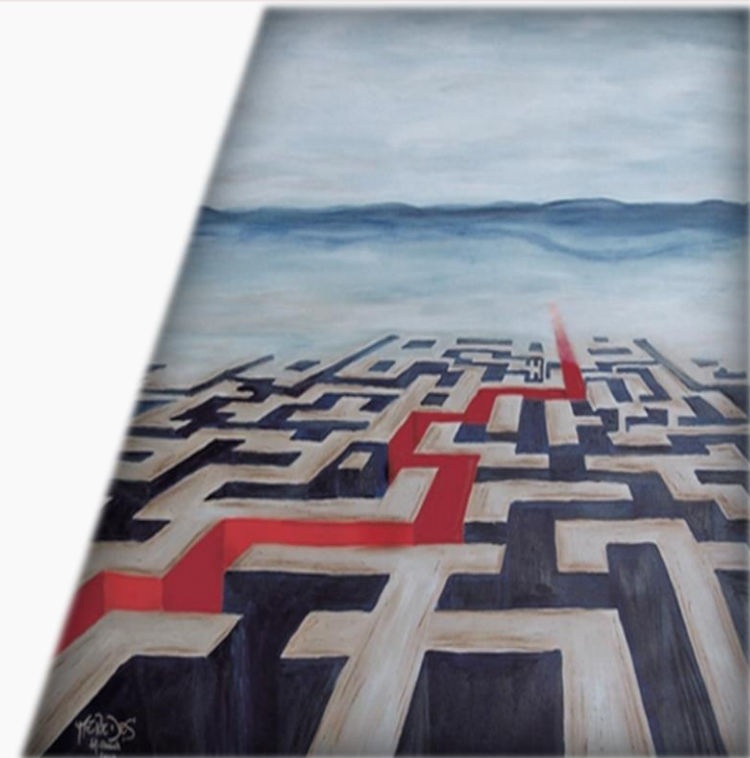
Further Information

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 www.ariad.de .



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