

May 2017**Specialised in Growth**

Ladies and gentlemen,



We are convinced that the German medical technology market can sustainably secure its excellent reputation and outstanding global market position by remaining innovative.

Together with Professor

Christian Koziol from the University of Tübingen, we have studied the relationships between the economic success of medical technology companies and their equity base. The research has provided some very interesting insight, a summary of which is included in this newsletter.

We also present the second part of our politics series, which focuses on "how Germans invest in companies" this time, and provide information on the most recent developments at our portfolio companies numares, AMW and ndd.

I hope you enjoy reading and look forward to your feedback.

Hubertus Leonhardt

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ARTICLES

Innovation requires equity capital: SHS market analysis of financing behavior among medical technology companies

German medical technology companies rely on equity financing and the truly successful companies among them also have particularly high equity ratios. This is the result of a market analysis conducted by Professor Christian Koziol from the Eberhard Karls University in Tübingen together with the investment firm SHS Gesellschaft für Beteiligungsmanagement. In 2014 the companies from the medical technology industry that were included in the analysis had an equity ratio of almost 55 percent. Over the entire duration of the study, this ratio was clearly above the comparable values of most other industries, the average among the 30 DAX-listed companies being 31.3 percent in 2013.

For Professor Christian Koziol, the analyzed data indicates that medical technology companies have a preference for equity financing, thus reducing their dependency on outside creditors, who tend to be more wary of risks. As he sees it, this is a clear vote of confidence for equity financing.

And it is especially the largest and most profitable medical technology companies that have particularly high equity ratios. "It is easier for these companies to implement their preferred form of financing and they choose to increase their equity capital despite the advantages that debt financing can hold for existing investors", explains Professor Koziol.

Only in phases of strong growth – with a rapid and significant increase in balance sheet totals – did the debt ratio increase among the companies included in the study. However, when rapid growth slows, this ratio also decreases again in the years to follow. After this, the equity ratio often even rises to a higher level than before the growth spurt.

As an investor in medical technology companies, SHS has come to the same conclusion as it is witnessing an increasing number of requests for equity capital. Especially innovative and growth-oriented medical technology companies contact SHS with an interest in a high equity ratio. "Especially when it comes to intensifying research and development efforts, we are seen to be the right partners, particularly in light of our many years of experience in the industry and our network", says Hubertus Leonhardt, Managing Partner at SHS Gesellschaft für Beteiligungsmanagement.



About the analysis:

Professor Christian Koziol from Eberhard Karls University in Tübingen worked together with SHS Gesellschaft für Beteiligungsmanagement to conduct an analysis of the financing behavior of medical technology companies in Germany. As part of this study, the financing expert analyzed the development of equity capital of more than 300 companies between 2007 and 2014 and examined the medical technology companies' annual statements with regard to equity capital, debt capital, balance sheet totals and annual profit.

Prof. Dr. Christian Koziol

Bundestag election 2017: German political parties' statements on investment in company stock in Germany

Since the Euro crisis, the interest rates in Europe have been extremely low. The interest rates on savings accounts, instant access accounts and other bank deposits have been extremely low for many years now, as are the rates on government bonds in Germany and other EU countries. Despite this fact, a large percentage of the populace still has most of its assets parked in bank accounts or life insurance policies that are also affected by these low interest rates. Yield-oriented investments, such as stocks, are only used by a fraction of the population. We wanted to know what the political parties in Germany think about this issue and how they intend to deal with it? Here are the detailed responses to our questions:

SHS Gesellschaft für Beteiligungsmanagement:

Only eight percent of the German population has invested in companies, which means that most Germans are not profiting from the German economy's development.

- Do you think it makes sense for more people to invest directly or indirectly in companies?
- If so, which measures would you like to implement to help more people invest in companies?
- Do you think it is important for large institutional investors like insurance companies to invest venture capital?



CHRISTIAN DEMOCRATIC UNION (CDU):

The CDU federal committee (BFA) for finances, economy and energy drafted a resolution at the beginning of November 2016 to improve investment options for retirement provisions. This resolution addresses issues that can have a positive impact on company financing. Among other things, these include the following:

- Checking the level of guarantee: although guarantees are costly, they have proven to be one of the biggest incentives when it comes to deciding on an investment. Pensions, in particular, are so focused on investment security that they can hardly offer any returns. We would therefore like to determine which criteria have to be met to gain acceptance for products with a lower level of guarantee, but a wider range of investment options and the prospect of higher returns. One requirement is that they can be used to build up capital-funded retirement provisions more easily and yet with moderation.
- Holding cash and cash equivalents: we will be looking at ways to reduce the holding of cash and cash equivalents. This includes defining minimum holding periods for eight to twelve years for government-sponsored products, for example.

As part of the BFA's resolution, these issues will be discussed within the context of creating the election program. For purposes of clarity, the final version of this will not include all the details of the previous resolutions.

THE GREEN PARTY (DIE GRÜNEN):

It is basically sensible for any investor to have a well-diversified investment portfolio. A higher proportion of stocks could make sense in this regard. For small investors, however, investing in individual securities is often too risky. Funds, on the other hand, are often associated with high costs and frequently not transparent enough for investors.

Among other things, we will seek ways to help citizens invest in equity capital more efficiently and less expensively. We are examining whether basic government products can be implemented in critical areas. These could offer investors transparent and widely diversified portfolios including a mixture of company shares and other investments with balanced risks and low costs.

Especially long-term investment vehicles like endowment life insurance policies and retirement provisions products are suitable for investing a small part of the managed assets as venture capital. At present, these can often only be invested in bonds and fixed-income securities. It is important to determine how they can most sensibly add venture capital investments to their portfolios.

THE LEFT PARTY (DIE LINKE.):

An economically and socially stable environment focused on the common good, as advocated by DIE LINKE, would certainly motivate more people to invest in companies and benefit from their development.

In light of the current conditions, which include poor wage development and large parts of the population fearing for their livelihood, DIE LINKE is primarily focusing on achieving fair wage development to provide people with a secure livelihood.

FREE DEMOCRATIC PARTY (FDP):

Do you think it makes sense for more people to invest directly or indirectly in companies?

Yes. Owning company stock strengthens each individual's assets. Especially in times of low interest rates, company shares serve as useful building blocks for private retirement provisions. This provides a way for our citizens to directly participate in our country's economic development and the opportunities of globalization.

If so, which measures would you like to implement to help more people invest in companies?

We advocate fair taxation concepts for earned income and capital gains to strengthen private retirement and pension assets. By reducing the tax burden, we want to provide citizens with greater financial freedom to make investments. To achieve this, we want to do away with cold progression, gradually eliminate the solidarity surcharge and define fair income tax rates to relieve the middle class.

Another sensible approach consists of funding voluntary models for employee share ownership by using employee shares to pay bonuses or part of the wages in the form of long-term stock options.

Do you think it is important for large institutional investors like insurance companies to invest venture capital?

Yes. In other countries, institutional investors provide a substantial part of the venture capital invested. We see a great opportunity here in Germany as well, to mobilize a significant volume of private capital for innovative young companies. At the same time, venture capital investments provide insurers, retirement and pension funds a good way to achieve adequate returns in times of low interest rates.

SOCIAL DEMOCRATIC PARTY (SPD)

The willingness to invest is too low in our country. We have been warning of this for a long time now. This applies to all forms of investment including risk capital. We not only want to stimulate public investment, but also investments in seed and venture capital. We also want to provide incentives for investment and stimulate new growth.

Germany is in urgent need of a change in mentality toward an increased willingness to take risks and engage in business endeavors. We are increasingly seeing good ideas not being able to be brought to fruition in Germany because they can't be financed here. Germany is behind in international comparisons when it comes to private financing of companies. We will only be able to maintain our prosperity in the long term if we can catch up in this regard. This is also important to provide employment opportunities in the rapidly changing digital economy.

PORTFOLIO COMPANIES NEWS

numares sets course for further growth

KEY FACTS

Year established: 2004

Business purpose: Development and marketing of new analytic and diagnostic tests based on nuclear magnetic resonance (NMR) spectroscopy and specific evaluation algorithms

Products: Diagnostic tests for detection of diseases (oncology, cardiovascular diseases, nephrology and neurology)

Locations: Regensburg, Richmond, Boston and Singapore

In the U.S. more than one million advanced lipoprotein subclass tests have already been performed using numares' technology. Results provide physicians with valuable information on their patients' risk to develop cardiovascular disease. Consequently, to further support its expanding customer base, the company has recently opened an office in Boston.

numares, a fast growing commercial stage diagnostics company, is developing software-based test systems for high throughput use in clinical routine and life science research. Their AXINON® system features a range of analytical and diagnostic applications using nuclear magnetic resonance spectroscopy to evaluate metabolomic biomarker networks. As metabolomics is used for the identification of biomarker networks, numares offers an easy-to-operate and

modular platform with high degree of standardization, robustness and throughput. This enables clinical research to take the critical step from bench to bedside and position metabolomics as the second important pillar in precision medicine next to genomics. In light of this, a collaboration with a prestigious university was formed to develop metabolomic biomarker networks for mental diseases.

In Europe, numares is preparing the launch of renalTX-SCORE®, a metabolomics test for diagnosis of renal-allograft rejection. renalTX-SCORE® is a non-invasive urine test and therefore offers many advantages over needle biopsy, which is the current gold standard. The company is developing tests in cardiovascular diseases, nephrology, oncology and neurology.



numares AXINON® lipoFIT® test system

AMW signs license agreement for distribution in China

AMW achieved approval for its Alzheimer's patch in Germany and other European countries in 2015. Signing of a license agreement in China now represents yet another step toward internationalization. The patch continually releases the drug rivastigmine through the skin over the course of 24 hours. Rivastigmine inhibits the degradation of acetylcholine; a substance that Alzheimer's patients lack. In contrast to oral administration, transdermal supply of the drug serves to reduce intake frequency and thus helps significantly increase patient adherence to their treatment regimen.

AMW develops and sells transdermal drug patches as well as active implants, which gradually release their active ingredients to the body over the course of



The rivastigmine patch produced by AMW

days or even months. In addition to the rivastigmine patch, the company has also received approval in Europe for two goserelin implants (1-month and 3-month implant) for the treatment of prostate cancer and a buprenorphine patch for the treatment of severe pain (particularly pain caused by tumors). Other products and technologies are in advanced stages of development including an actively controllable drug patch.

KEY FACTS

Year established: 2008

Business purpose: Development, production and marketing / out-licensing of specialty pharmaceuticals.

Products: Transdermal systems (drug patches) and active implants for medical applications in oncology, neurology, psychiatry and endocrinology.

Location: Warngau (D)

EasyOne receives FDA approval – device allows for improved diagnosis of pulmonary disorders

KEY FACTS

Year established: 1996

Business purpose: Development, production, and distribution of diagnostic products in the area of respiratory disorders, mainly COPD and asthma.

Products: Spirometer (EasyOne/EasyOne Air), different devices for lung function testing (EasyOne Pro/EasyOne Pro Lab; Easy on PC)

Locations: Zurich (CH) and Andover (USA)

At the beginning of 2017, the new ndd spirometer, EasyOne Air, received FDA approval. ndd achieved a market share of 45% in the United States with its previous model. The new device improves on the strengths of its predecessor including ease of handling and freedom from calibration as well as fast and precise measurement and allows for integration in private practice and hospital systems.

The new version of EasyOne Pro was also approved by the FDA in March 2017. The device measures the lung's capacity to absorb oxygen and allows for accurate early diagnosis of pulmonary disorders including the epidemic

COPD by doctors in private practices for the first time. Treatment can therefore be started sooner to significantly improve the course of the disease if not cured.

The EasyOne Pro is also used in the clinical research of medicinal products due to its simple handling as well as the precise, fast and reproducible measurement qualities.



The new ndd spirometer EasyOne Air

INSIDE SHS

Christoph Westerteicher joins the Venture Advisor team at SHS

Christoph Westerteicher has been named Venture Advisor at SHS with a focus on Digital Health. Mr. Westerteicher most recently headed the international "Hospital to Home" business activities at Philips. His responsibilities there included the development of eHealth / telemedicine solutions as well as market development in Europe, Asia and other countries outside the USA.

Westerteicher has gained extensive experience in the area of medical electronics over the course of his 36-year career at Hewlett-Packard, Agilent and Philips. He has held executive positions in the development of patient monitors and anesthetics system solutions. Over the past 20 years, Christoph Westerteicher has specialized in the development and market launch of telemedicine solutions and services including evaluation of new supply structures. He has played an instrumental role in pioneering telemedicine studies and publications.



He was a member of the industry association COCIR in Brussels and headed the Telemedicine Focus Group.

Christoph Westerteicher, new Venture Advisor at SHS

CAREER

Jobs at SHS

Managing Director/MBI candidate (m/f) for medical technology, succession solution

We are regularly seeking executives who would like to become entrepreneurs together with us and drive the performance of companies. Together we develop a corporate vision and strategy, which you then put into action with our support.

[Find out more >>](#)

Internships for students

Are you studying business, economics or engineering? We offer you the opportunity to apply your previously acquired knowledge as part of an experienced team of SHS professionals. You will benefit from a project-oriented, flexible working atmosphere, a flat hierarchy and diverse employment opportunities offered by SHS throughout the entire investment activity cycle. [Find out more >>](#)

Master's thesis at SHS

Are you writing your master's thesis in business, economics or engineering? We offer you the opportunity to write it as part of a six-month internship with our company. We would be happy to help you define a current topic in the area of venture capital / private equity. [Find out more >>](#)

Jobs at SHS portfolio companies

International Sales Manager (m/f)

TRI Dental Implants AG is one of the fastest growing providers of high quality dental implants in Switzerland. In the role of International Sales Manager you will be responsible for the international distributor network of TRI Dental Implants, both in revenue and business development. You will be supported by an Assistant for International Sales.

[Find out more >>](#)

Visit the following website to see all of TRI's job offerings: <https://www.tri-implants.com/de-de/content/comp-jobs/jobs.aspx>

CFO (m/f)

We are seeking someone with strong negotiating skills and experience as a CFO for this challenging job at one of our fast-growing portfolio companies in the medical technology sector in Switzerland. You can look forward to taking on a wide variety of interesting tasks at a young, solidly established, innovative company. [Find out more >>](#)

PRESS REVIEW

Selected press starting in January 2017

A selection of relevant articles about us and our portfolio companies:

medtech zwo, March 2017, page 20 ff. "Auf Einkaufstour nach Deutschland" (On a Buying Spree in Germany)

Chinese investors have become significantly more active lately. Therefore medtech zwo has dedicated the first printed edition of its magazine to a detailed look at this topic. Dr. André Zimmermann provided insight into the work at SHS for the article and reported on our experience with the Chinese market and investors. Special issues have to be taken into consideration both with regard to entering the Chinese market and doing business with Chinese investors.

[Find out more >>](#)

Handelsblatt, February 25, 2017: "Die Eigenkapitalkönige" (The Equity Capital Kings)

The newspaper Handelsblatt took a look at the market analysis of the financing behavior of medical technology companies and summarized the most important findings: Development of new products plays a big role in the medical technology industry. Therefore, the industry primarily relies on equity financing. "Medical technology companies do not want to be forced to comply with the requirements of lenders who are wary of risk", explains Professor Christian Koziol as a primary reason for the high equity ratio. [Find out more >>](#)

Frankfurter Allgemeine Zeitung, February 6, 2017: "Der Knochen aus dem Drucker hält besser" (Bones from the Printer Last Longer)

The company Emerging Implant Technologies (EIT) produces spinal implants using 3D printing. The Frankfurter Allgemeine Zeitung newspaper published a portrait of this SHS portfolio company and the founder of Guntmar Eisen as part of its founders series. The medical technology company is the first manufacturer of orthopedic products to exclusively

focus on implants designed and produced exclusively using additive manufacturing methods. SHS is supporting EIT with its continued internationalisation efforts. [Find out more >>](#)

Frauenfelder Zeitung, January 12, 2017: “Von Frauenfeld auf den Weltmarkt” (From Frauenfeld to the Global Market)

SIS Medical is seeking to continue its growth and has therefore moved to Thurgau. The company, which was founded in Winterthur in 2007, develops and produces pressurized balloon catheters for heart patients. The move is an important milestone for SIS Medical, as the new site provides the company with enough space to rigorously pursue its continued growth in the years to come. This is an ideal location for realizing managing director Willi Zwahlen's plans to forge ahead with the company's expansion around the globe and meet his expectation to achieve significant growth rates. The company, in which SHS holds a majority share, is already represented in more than 40 countries.

Investment focus:

Sector:	life sciences (medical technology, diagnostics, applied technologies, industrial biotechnology/pharmaceutical industry; no drug development)
Geographical Focus:	Germany, Austria, Switzerland
Reasons for investment:	growth capital, strengthening equity, MBO/MBI, change of shareholders/succession, M&A financing, spin-off
Company situation:	growth/expansion, succession/company sale, internationalization; operating profit may be negative for growth, or for technology-related reasons
Transaction value and Investment size:	transaction value: up to € 100 mn; investment amount SHS IV: € 2-20 mn, with a co-investor from the SHS-network up to € 50 mn
Investment types:	majorities or minorities, equity & financial instruments similar to equity