Value Ideas

A Research Publication by DZ BANK AG

Methodology for Value Ideas Investing

EQUITIES

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Value investing is one of the most successful investment strategies there are and DZ BANK Research therefore devotes a series of publications entirely to value investing with its own screenings.

The approach is based on the principles of value-oriented, risk-averse investing in equities and bonds. This way, we propose to give our readers both value-investing ideas for individual stocks and put investors in a position to reproduce an entire portfolio from a value-investing point of view.

At the heart of our approach are companies which generate sustained and, as far as possible, steady sales and earnings growth. The value of a company is created through growth – value and growth are therefore not contrary investment strategies. The idea that value investing might only involve buying shares with a high dividend yield and low price-to-book value rate is only a small part of the story.

The principles and analysis methods which we use in the context of value ideas differ quite considerably in some respects from the methods used in other DZ BANK Research departments. The value ideas approach is a stand-alone investment style alongside conventional fundamental equity analysis, technical analysis and sustainability analysis. Value ideas statements evaluate and highlight individual aspects which form the basis for an investment recommendation; the statements do not constitute investment recommendations per se.

In value investing, the difference between the price and intrinsic value of a security has a major impact; the higher this margin of safety, the smaller the risk for investors. By concentrating on the margin of safety, the focus of value investors differs significantly from that of most other investors: for value-oriented investors, investing means avoiding mistakes, whereas most other investors see how much they can earn from a specific investment. The margin of safety offers hedging on the downside, whereas durable business models offer the potential to increase value.

As part of our value ideas approach, we aim for absolute profit and not relative orientation to a share or bond index. However, the targeted value growth should significantly exceed the increase in value of common investment alternatives beyond an economic cycle.

Value ideas are directed e.g. at the Volks- and Raiffeisenbanken and at institutional clients at home and abroad.

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Author:
Michael Bissinger, CEFA, CIIA, ANALYST
+49 69 7447-42013
Michael.Bissinger@dzbank.de

VALUE IDEAS – DZ BANK'S VALUE-INVESTING APPROACH

What is value investing?

In simple terms, value investing is first and foremost a process by which the intrinsic value of an underlying security is determined in order ultimately to buy that security at a substantial discount to its intrinsic value.

Intrinsic value = value of an asset + earnings strength + growth

In this instance, the intrinsic value consists of the value of existing assets, the value of the current earnings strength and the value of a company's future growth. This method may seem simple and indeed the major challenge in value investing is usually not in calculating the intrinsic value but rather in having the necessary patience and discipline only to buy the securities in question when the price is attractive and only to sell them when prices are high.

High degree of patience and discipline of crucial importance

Value investing means avoiding mistakes

The difference between the price of a security and its intrinsic value is called the margin of safety, and the higher the margin of safety, the smaller the risk of an incorrect assessment having negative consequences for investors. It is precisely the factoring in of this margin of safety which is a key distinguishing feature between a value investor and most other investors: for value-oriented investors, investing means avoiding mistakes, whereas in making an investment decision, most other investors concentrate on how much money they can supposedly make with a specific investment. Typical mistakes are unpredictability, bad luck, incorrect analysis and inaccuracies.

Margin of safety offers protection from losses

"Mr. Market" – the manic depressive partner

The practice of buying securities for less than they are worth – in value-investor jargon "buying a dollar for 50 cents" – is easiest to put into practice in the equity market. In value philosophy, this is home to Mr. Market, an imaginary, manic depressive adviser who offers to buy or sell stocks at his specific price very second of every day around the globe. One day, he offers more for a security, the next day much less, and on the third day perhaps nothing at all. His prices fluctuate significantly.

Intrinsic value of a share fluctuates less than its share price

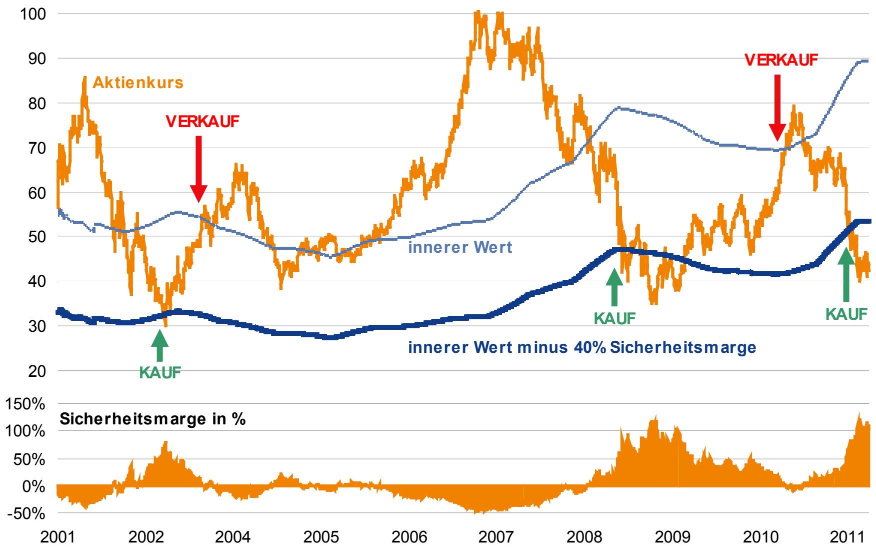
In contrast, the intrinsic value of a share fluctuates little since a share securitises the participation in a company whose business prospers over the long term, but which never fluctuates as much as the share price might suggest in the short term. Since value investors regard shares as a long-term stake in a company rather than as short-term trading securities, financial markets are, in view of their high volatility, the ultimate originators of investment opportunities since they are highly liquid markets which are permanently exposed to the psychology of the masses and therefore very vulnerable to it.

Financial markets are ultimate initiators of investment options

Mr. Market offers intelligent investor attractive buy and sell opportunities

Mr. Market's mood swings offer intelligent investors attractive buy and sell opportunities because they know the intrinsic value of "their" companies, buying if the price falls below the calculated value less a margin of safety (e.g. 40%, see following graph). Similarly, intelligent investors sell if the offered price exceeds the calculated intrinsic value since holding onto an overvalued stock is speculative behaviour.

SHARE PRICE, INTRINSIC VALUE AND MARGIN OF SAFETY OVER TIME

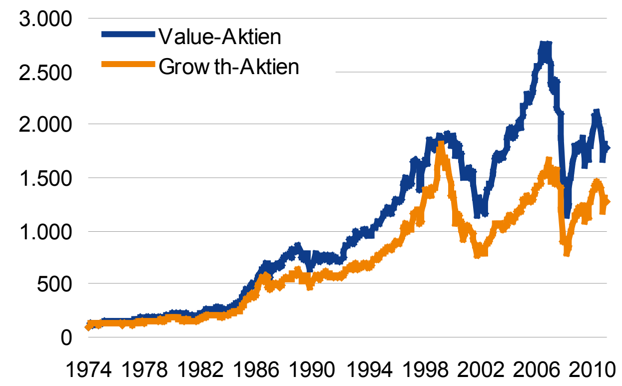


Source: DZ BANK

Value investors generally not part of the herd

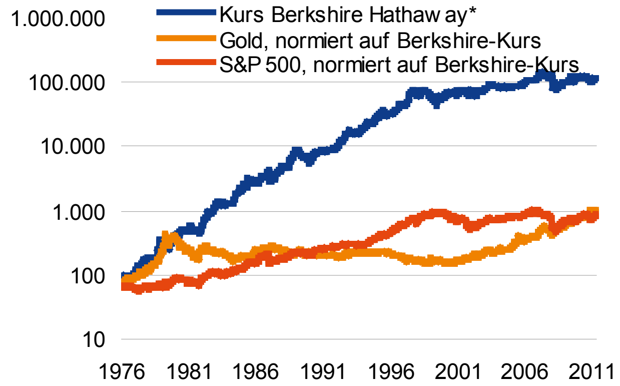
Acting as a value investor generally means standing apart from the herd, calling into question "conventional wisdom" and going against the prevailing view. However, swimming against the tide can also mean underperforming the market over a longer period of time, but this pays off in the long term. This is illustrated by the comparison below between the price performance of value shares against growth shares and the price performance of Warren Buffett's investment vehicle, Berkshire Hathaway, against the S&P 500 and the price of gold.

OUTPERFORMANCE WITH VALUE SHARES OVER A MULTI-YEAR COMPARISON*



*31.12.1974 = 100, to May 2012, all in USD
Source: MSCI

BERKSHIRE HATHAWAY VS. S&P 500 AND GOLD*



*Berkshire Hathaway is Warren Buffett's investment vehicle
Performance p.a. since 1976: BRK +18%, gold +6%, S&P 500: +6%
Source: Datastream

Distinguishing between value investing and other investment methods

What value investing is (mostly)	What value investing is not
Trading based on **facts** (balance sheet, customer base, products, management)	Trading largely on the basis of **forecasts** (economic growth, sales, etc.)
Investing with **margin of safety** against analytical errors	Confidence in models and efficient markets
Buying assets which generate a permanent cash flow (equities, corporate bonds)	A collection of (rare) things such as cars, gold, stamps or paintings
Looking at equities as a long-term co-ownership of a business	Looking at equities as trading securities and underlying assets for derivatives
Own understanding of risk (likelihood of underperformance, NOT volatility)	Seeing price fluctuations as a risk
Focus on company performance (management, products)	Focus solely on price performance ("buy low, sell high")
Long-term investment focusing on maximum profit after inflation	Short-term speculation aimed at maximising profits, without taking inflation into account
Ignoring the herd (of investors) (inclination towards **anticyclical** trading)	Swimming with the mass of investors (**pro-cyclical approach**)
Approach geared to long-term absolute gain, cash in the portfolio as a strategic asset	Relative orientation to a benchmark, being fully invested
Taking into account sentiment indicators, psychology and ways of thinking (Mr. Market)	Believing in rational expectations, normal distributions, etc.
Reckoning with probabilities	Financial models with Greek letters (alpha, beta, delta etc.)
Acting with as little emotion as possible, in order to benefit from the greed and fear of others	Rule-bound, mostly momentum-based trading
Focus on good quality companies	Buying exclusively equities with a low PBV or high dividend
Investment in temporarily unpopular but healthy companies	Investing in trends, paradigms and shares that are currently the fashion
Flexible and pragmatic investment management	Rigid focus on countries, sectors, indices, topics or asset classes
Concentrated portfolio with just a few stocks	Broadly diversified portfolio ("a zoo") with > 40 stocks
No derivates (not even for portfolio hedging purposes)	Only long-term, backward looking, boring or obscure

Source: DZ BANK Research

Value Investing - basic principles and styles

In the following, we list seven key words and fundamental principles of value investing which have a major influence on our value-investing approach.

BASIC PRINCIPLES OF VALUE INVESTING

Sicherheitsmarge	Differenz zwischen Kurs und innerem Wert als Sicherheitspuffer
Geschäftsinhaber	Kaufe das Unternehmen, nicht die Aktie
„Good Business“	Gutes Geschäftsmodell, gute Produkte, ökonomischer „Burggraben“
Risiko ≠ Volatilität	Risiko beschreibt die Wahrscheinlichkeit, etwas falsch einzuschätzen
„Mr. Market“	Der manisch-depressive „Partner“ des Investors
Kompetenzzirkel	Einige wenige Anlagen richtig verstehen – dafür fokussiert investieren
Geduld und Disziplin	Zeit vergeht, bis der innere Wert erreicht wird

Source: DZ BANK

Theoretical principles

Valuation methods and reasons for the undervaluation of companies

DCF analysis with estimates unsafe from a value point of view

Processing unsafe forecasts for the future does not offer any margin of safety

On the basis of the seven fundamental principles listed, we now look at how value investors value companies. To do so, depending on their investment style, they largely make do without the use of decided estimates derived from discounted cash flow (DCF) models which are very dependent on assumptions about the future and on the choice of discount rate. Although forecasts for the first year in a DCF are perhaps still reliable, from year two or three at the latest, estimates are uncertain and therefore speculative. Fundamentally, it is true to say that mixing good and bad information always gives bad information. Accordingly, value investors do not usually waste any time over a company's sales forecasts for the next ten or 12 years which are required for a DCF. Instead, they use simplified DCF methods without estimates. Usually, they also leave out peer-group comparisons.

The classic valuation methods used in value-oriented investing are outlined in the following.

Break-up value

If a company underperforms over the long term, it may make sense under certain circumstances to sell off individual divisions in order to reflect the higher value of the remaining activities. *Example:* a company has two divisions, one of which generates earnings of EUR 3 per share and the other loses EUR 1 per share (EPS: 3 – 1 = EUR 2 per share). Assuming a share price of EUR 24, then the company's PER is 24 : 2 = 12. If the underperforming division is sold off, the stock then in effect only trades on a PER of 24 : 3 = 8.

Net current asset value = NCAV

NCAV was created by Benjamin Graham as a ratio which is calculated by subtracting long-term and short-term debt from current assets. The focus is therefore ultimately on the net cash position after the liquidation or sale of all further current asset items (e.g. inventories) and is an extremely conservative valuation method. In addition, Benjamin Graham applies a discount of 33% on the figure obtained. In most cases, screening for stocks where the NCAV is higher than the market value only leads to success in a pronounced bear market.

Book value

The value of equity based on accounting figures; it can differ substantially from the true intrinsic value, mostly because of inflated assumptions about intangible assets (brands, rights, etc.).

Earnings power value

In this more modern method in relation to the deep-value methods outlined above, a company's operating earnings are normalised, i.e. adjusted for one-off effects and discounted using the cost of capital. The value of operating assets is then added to the "normalised earnings power" result.

We also propose to look at why companies on the stock market are undervalued. There are many possible reasons why a company's share price may not reflect its fair valuation. A screening using the following categories gives a good chance of discovering new buy opportunities.

Distressed sellers

These are shareholders who sell off their shares for non-economic reasons which

have nothing to do with the company per se, thus putting pressure on the share price.
Example: prior to its collapse in 2008, Lehman Brothers sold large amounts of high-dividend REITS stock which then slumped, even though the payouts on these securities were always reliable even during the recession and thereafter.

Out-of-favour sectors
Good opportunities for buying in to companies cheaply can arise in sectors which are temporarily out of favour with investors and where share prices have fallen sharply over a period of time.
Example: companies in the reinsurance sector (2011), which were dragged down along with banks in the wake of the European debt crisis, and lost ground despite solid fundamental data. Many companies in this sector are now trading at 50% below their book value.

Outlook for a specific (geographic) region is muted
Economic worries can depress share prices in entire countries and regions, leading to good buy opportunities for individual stocks.
Example: Asia crisis in 1997 which offered excellent opportunities to benefit from an exaggerated reaction in the markets.

Serious problem, but no long-term consequences for the business model
Example: BP 2010 (oil disaster in the Gulf of Mexico)

Sharp fall in the entire market, e.g. on economic worries
Example: before/during recession in Germany in 2003 and 2009

Company has let go of its core business or neglected it
Example: Hewlett Packard 2011 (temporary focus on software including expensive acquisition after Leo Apotheker took over as CEO).

Company is supposedly an unattractive group spin-off
Example: Lanxess from Bayer (2005)

Company is too complex to be understood/analysed
Example: some company bonds still serviced after bankruptcy (Lehman 2008, Enron 2002)

Other possible reasons for temporary undervaluation:

- company has cut or suspended its dividend
- company is small and unknown (possibly no analyst coverage)
- stock withdrawn from leading share index.

INVESTMENT PHILOSOPHY

Clearly defined investment philosophy

We have set out our investment philosophy based on the fundamental principles of value investing and our most important findings on this approach, and have made a strict distinction between the criteria by which we want to invest and those by which we do not. We would point out that our investment philosophy is a "living" thing and is therefore likely to be subject to changes in future quarters and years, because we are continuously aiming to improve it.

Philosophy in value ideas– what is our approach?

1. **We look for listed assets which are trading at a marked discount to their intrinsic value.** This generates a margin of safety in the event of possible miscalculations. The margin of safety is necessary because the intrinsic value cannot be calculated precisely and the future is uncertain. The listed assets in question are generally company shares and bonds.

2. **We exercise patience and regard shares as long-term ownership of small parts of a company**. For us, shares are not short-term trading paper or underlying assets for derivatives.

3. **We regard risk as an absolute – defined as the potential to lose money invested for good.** For us, volatility is not a suitable measure of risk. There is always a risk if the analysis of a business model and assumptions in relation to its sustainability were incorrect. However, if the assumptions prove correct, then falling share prices offer an opportunity to buy.

4. **We look for companies whose business model we understand; in companies which have a good management and can look back on a long and successful history.** Our preference in this respect is for owner-managed companies and companies with long-standing anchor shareholders. Management has a high degree of confidence in the company and has demonstrated this, e.g. by buying shares.

5. **We look for companies which can have a big impact on their own future.** The market entry of competitors into the company's area of business is made more difficult by a sort of modern economic moat, which cannot be bridged on account of various unique characteristics. These include brands, patents and licences, exchange rate costs incurred when suppliers are changed, e.g. at software companies, network effects (e.g. providers of credit cards), cost leadership and local market dominance.

6. **We also look for companies which are unpopular for a time because of short-term problems.**
   Unfavourable sector trends, external influences, changes in the capital and shareholder structure or other events can lead to companies becoming unpopular for a time. Such events include for example the exit from an index or company spin-offs. This opens up opportunities.

7. **We seek absolute profits and not a relative orientation to an index.** The value growth targeted, however, should significantly exceed the performance of common alternatives over the economic cycle.

8. **We look for in a very concentrated manner in just a few positions** which we know well and in which we are very confident in our analyses. However, in

the short term, this approach may lead to a high level of volatility in the portfolio.

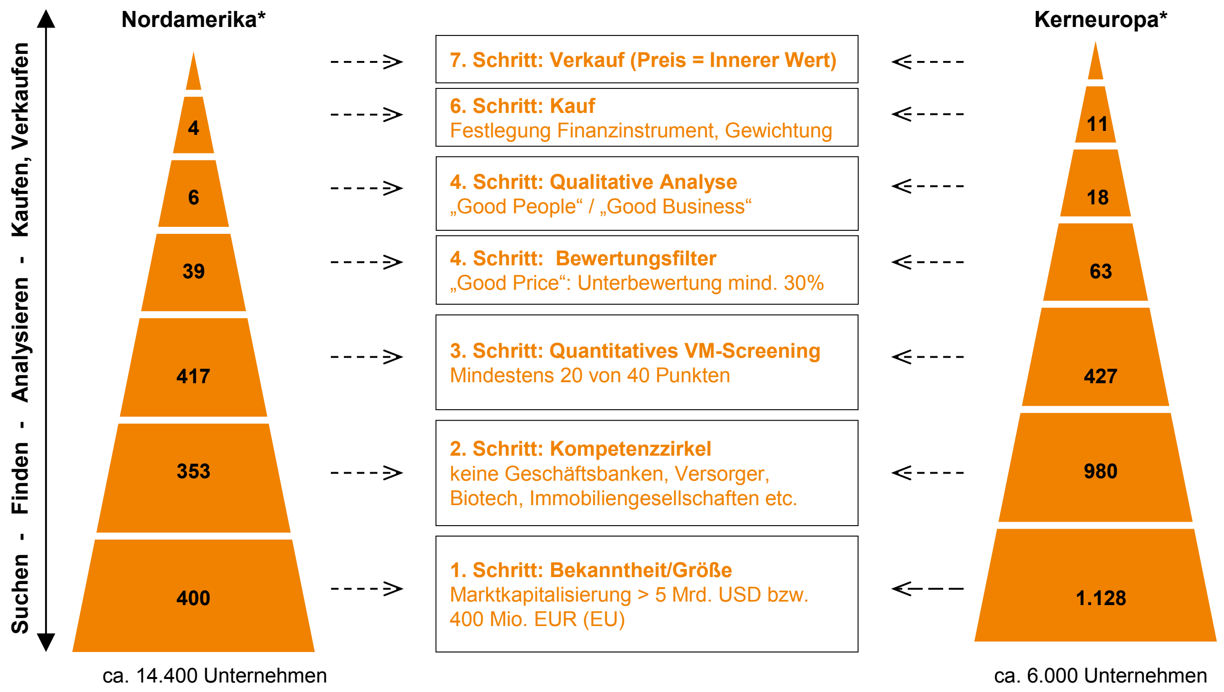
9. **We regard cash as a strategic asset.** We believe that investing well is only possible if investors are very flexible. Substantial liquidity buffers offer an opportunity to buy in falling markets. If the valuation situation in the equity market is so unsatisfactory that it offers no promising investments, then part of our liquidity can be used for M&A arbitrage positions.

Selection process

Economic forecasts not used in our investment process

Our investment approach is fundamentally orientated, i.e. in our selection process we do not use exchange-rate or economy data. First, we define regularly our universe of investable companies. This universe provides the basis for our selection strategy, i.e. further screenings, research and analyses for the final stock selection. We reserve the right to change various parameters in future and will give notice in good time of any such changes. Our investment process is illustrated in the diagram below.

"VALUE IDEAS" PORTFOLIO – INVESTMENT UNIVERSE AND INVESTMENT PROCESS



Universum potenzieller Kaufkandidaten

* Number of companies meeting the screening criteria varies
North America = US, Canada; core Europe= Germany, Austria, Switzerland, France, Italy, Spain, Netherlands, Denmark, Sweden, Norway.
Source: DZ BANK

Quantitative VALUE MARATHON (VM) screening

We have introduced our VALUE MARATHON (VM) scoring method, in which a company is awarded one point for each of the last ten years in which there is an increase in sales, earnings (EBIT), enterprise value and book value. A company which has seen a year-on-year increase in each category would therefore be awarded 40 points. In this approach, EBIT can also be replaced by measures of performance such as EBITDA margin and EPS, and a company could then score a maximum of

50 points. In VM scoring, the companies which score points are those which have consistently generated value and not those with high sales and earnings fluctuations.

We now use VM scoring as one of several screening criteria to work out the investable universe in the context of the DZ BANK VALUE IDEAS approach. Our VM scoring method is simple, but offers a number of advantages. These include mainly the fact that only established companies pass the screening and can be considered for further analysis. Companies which have only recently become listed (spin-offs, IPOs) fall through the net as do glamour stocks, which quickly fall out of favour again.

GERMAN MARATHON CORPORATIONS: COMPANIES WITH STEADY SALES AND EARNINGS GROWTH

Unternehmen	Marktkapitalisierung (Mio. EUR)	Sektor	Umsatz gesteigert zu X der letzten 10 Jahre	Umsatz CAGR 10 Jahre	EBIT gesteigert zu X der letzten 10 Jahre	EBIT CAGR 10 Jahre	EV gesteigert zu X der letzten 10 Jahre	EV CAGR 10 Jahre	BW/Aktie gesteigert zu X der letzten 10 Jahre	BW/Aktie CAGR 10 Jahre	Gesamt Score	Performance CAGR 10 Jahre
Wirecard	5.165	Technologie / Software	10	31,8%	10	33,7%	9	37,6%	10	28,0%	39	25,4%
Fresenius SE & Co. KGaA	34.952	Healthcare	10	13,4%	9	14,8%	10	17,9%	10	12,4%	39	17,1%
Fresenius Med. Care	22.414	Healthcare	10	9,5%	10	9,5%	9	11,3%	10	9,1%	39	10,7%
CANCOM	769	Computer Services	10	15,2%	10	33,1%	8	36,3%	10	17,3%	38	29,6%
Fielmann	5.505	Handel	10	5,9%	10	11,0%	8	17,0%	10	6,5%	38	16,5%
NEXUS NM	268	Software	10	16,6%	9		8	23,6%	10	7,0%	37	15,4%
Nemetschek	1.930	Software	9	11,2%	9	15,0%	8	32,2%	10	13,3%	36	29,0%
CTS Eventim	2.880	Medien	9	12,5%	10	16,3%	7	24,0%	10	16,0%	36	18,1%
MTU Aero Engines	4.344	Industrie / Investitionsgüter	9	7,3%	10	10,2%	8	12,9%	9	10,2%	36	13,9%
Grenkeleasing	2.501	Business Support Services	10	11,6%	8	9,2%	8	12,9%	10	12,0%	36	12,8%
Carl Zeiss Meditec	2.665	Healthcare	10	12,4%	8	13,9%	8	14,7%	10	7,2%	36	9,3%
Bertrandt	992	Automobile	9	15,7%	9	56,2%	7	23,2%	10	20,4%	35	28,3%
Rational	4.846	Industrie / Investitionsgüter	9	8,6%	8	9,2%	9	13,8%	9	14,8%	35	14,1%
Henkel	42.042	Konsumgüter	9	4,2%	9	7,4%	7	10,1%	10	9,7%	35	13,9%
Isra Vision AG	278	Software	9	9,6%	8	10,4%	8	4,9%	10	18,1%	35	11,2%
Merck KGaA	35.908	Healthcare / Pharma	9	8,3%	7	7,9%	9	14,8%	10	12,5%	35	9,0%

Source: Bloomberg, DZ BANK – cf. publication of 23.05.2016

Company valuation methods

We use various established valuation methods

We use various approaches and methods in the context of value ideas to identify shares and bonds which are incorrectly valued. Although the underlying methods (incl. DCF and multiples valuations) are similar to those used in our Equity Research department, in the Value Ideas division, we do not formulate longer-term, and hence very uncertain, estimates. Our models are based largely on historical data. This approach differs completely from DZ BANK's conventional equity analysis in which the valuation is based among other things on detailed estimates of the future performance. In the following, we outline the valuation methods we use.

PREFERRED VALUATION METHODS

Owner´s Earnings *(nach Buffett)*	**Earnings Power Value** *(nach Prof. Greenwald)*
Gewinnrendite / ROIC *(nach Greenblatt)*	**Intrinsic Value** *(nach Graham / Prof. Dodd)*
Kennzahlen *(KGV, KBV, KCF, Dividendenrendite etc.)*	**Penman-Modell** *(IN PLANUNG nach Prof. Penman)*

Source: diverse

Owner earnings

Owner earnings: value of a company derived from future free cash flows

The term "owner earnings" was coined by Warren Buffett. The aim of this approach is to identify companies which generate surplus cash. In this instance, the intrinsic value of a company is calculated based on owner earnings, i.e. cash flows from the company available to the owner in future, discounted using a suitable discounting factor.

Assumption that competitive position and production capacity remain unchanged

In his explanations, Warren Buffett concentrates particularly on calculating the input factors for this approach. Owner earnings are calculated based on the assumption that the company can maintain its competitive position and production volume in the long term. This involves calculating or estimating the necessary maintenance investment to this end, for example.

Owner earnings are calculated as follows:
net profit
+ write-offs
+ specific other non-cash expenditure
./. average investment in plant and equipment
Owner Earnings

The approach can be seen as rather conservative since future growth is not taken into account in the formula used to calculate intrinsic value.

Earnings power value (EPV)

EPV valuation in accordance with Prof. Greenwald method

In addition, we also use "earnings power value" (EPV), a recognised method already mentioned in this study developed by Prof. Greenwald (Columbia University New York). The EPV model is also a DCF approach. In this method, a company's operating earnings are adjusted for one-off effects and normalised over the economic cycle. This eliminates the impact on profitability of various times in the economic cycle. As such, the method assumes a sustainable (on average) level of achievable profitability. Since the strict value investor is not prepared to pay for growth, this method does not factor in future but uncertain growth.

The calculation includes "no-growth free cash flow", i.e. cash flow which only factors in maintenance investment. In simplified terms, the first step can also involve taking into account a company's average profitability (EBIT) over the last 5 – 8 years. This figure is multiplied by current sales and discounted with the cost of capital. In order to ensure a sufficient margin of safety, we recommend using a discounting rate of 10% to 15%. Finally, the value of non essential assets is added to the normalised operating earnings strength result. This figure is juxtaposed against the current enterprise value.

Earnings yield/ROIC

ROIC and EBIT/EV valuation according to Prof. Greenblatt

Another component in our valuation building block system relates to the return on invested capital (ROIC) and earnings yield calculated as operating profit divided by enterprise value (EBIT/EV). The ROIC is a measure of how much cash a company earns for every euro invested and therefore a measure of the company's capital efficiency. It is calculated by dividing net operating profit after tax (NOPAT) by invested capital. A strategy is value creative if the actual return on capital invested (ROIC) is greater than the weighted average cost of capital (WACC). In our view, the ROIC is preferable to return on equity (ROE) since ROE leaves out the financing structure and hence the leverage effect. We also use EBIT/enterprise value, as mentioned above, to calculate earnings yield or its inverse value, the more common EV/EBIT ratio. Enterprise value consists of market capitalisation plus net debt. In relation to an analysis of the price-earnings ratio (PER), this approach offers the advantage that the total capital structure is taken into account, as in the case of the ROIC. In addition, this approach leaves out differences in tax and interest rates from one company to another. Since EV also takes into account the high cash position of some value stocks which can be valued separately from the company's operations, we see a further clear advantage therein in relation to a PER analysis.

EBIT/EV=
How favourable is the valuation?

ROIC =
How efficiently does the company use its capital?

Intrinsic value as per Graham/Dodd

Calculating intrinsic value using the Graham formula

In the 1970s, Graham developed various formulae to calculate the intrinsic value of a share and was therefore one of the first hedge fund managers to use a quantitative selection process. The most familiar formula is as follows:

Intrinsic value = (EPS x (8.5+2g) x 4.8) / Y

where g= EPS growth rate for the next 5 years, Y= current yield on AAA corporate bonds and assumptions that the fair PER for a no-growth company is 8.5 and the multi-year average of the comparable (almost) risk-free interest rate as measured based on an AAA-rated corporate bond is 4.8%.

We use this formula as part of a value-ideas screening method and to value companies. Graham also developed other valuation formulae which we will also outline and use where necessary.

Penman model

The model is based on the work of Prof. Penman of Columbia University and is used to calculate a company's fair value with the help of just a few balance-sheet and P&L figures.

Metrics

Simple metric screening in the context of preselection of screening process

We have used various other ratios to calculate the ranges for the intrinsic value (cf. selection process, step 4), including EBIT/enterprise value, dividend yield, return on equity and return on invested capital. These ratios can be used at most for an initial screening, but not to calculate the intrinsic value.

Other remarks

Normalisation of one-off effects

When using all the above parameters, we also apply various normalisation measures on a case-by-case basis, in order to adjust extraordinary effects or work with multi-year historical averages. We will give precise details of the assumptions we have made in the valuation in the respective company analysis.

Bond valuation

Bond valuation only based on higher margin of safety and meeting of usual market credit worthiness requirements

We also buy the bonds of companies which meet our high quantitative and qualitative screening requirements and check lists. In our valuation of the bonds, we use the NPV method, taking into account risk premiums of up to two percent in order to ensure a sufficient margin of safety. We also ensure that further requirements are met in relation to the company's credit worthiness. The pre-selection process is usually based on the rating assigned by the major rating agencies. In the case of unrated bonds, we use various credit metrics, including a company's interest coverage ratio (EBIT/interest expense > 3), debt ratio (net debt/EBITDA < 5) and equity ratio (shareholders' funds/total capital at least 35%).

Value-ideas screenings

We carry out regular screenings in which, similarly to our investment process, we show shares which should receive more attention at the moment based on our value-ideas criteria.

The screenings are a purely quantitative evaluation in line with our VM scoring and value assessment method. The results highlight various aspects such as valuation, quality or quality at a cheap valuation, but also any unusual price movements.

Value Ideas: pros and cons

1. Pros

+ Consistent investment approach with proven, long-term record
+ Disciplined approach based on a clearly defined investment philosophy, using check lists
+ Trading based on fundamental analysis, not short-term market sentiment and forecasts
+ Extremely low implied expectations in relation to company performance
+ Paying "over the odds" for shares is avoided
+ Active management with low turnover frequency in the portfolio
+ Risk averse, aim is to preserve capital, margin of safety as buffer

2. Cons

- Investing in companies which are not in the limelight
- A stock is bought when it is undervalued, and prices can fall further subsequently
- Selling often takes place "too soon", i.e. when intrinsic value has been reached
- Value lags behind the market in momentum markets
- High cash ratio not entirely desirable

Publications

+ Ideas for retail and institutional investors
+ Monthly information in the form of screenings
+ Further enlightening through specialist articles
+ Transparent, long-term oriented portfolio with extensive analyses of each position

I. IMPRINT

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DZ BANK AG Deutsche Zentral-Genossenschaftsbank, Frankfurt am Main,
Platz der Republik, 60265 Frankfurt am Main
Telephone: + 49 69 7447 - 01
Telefax: + 49 69 7447 - 1685
Homepage: www.dzbank.de
E-mail: mail@dzbank.de
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Head office of the company: Registered as public limited company in Frankfurt am Main, Local Court (Amtsgericht) Frankfurt am Main, Commercial Register HRB 45651
Competent supervisory authorities:
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www.bvr-institutssicherung.de
www.bvr.de/SE
Responsible for the contents: Stefan Bielmeier, Head of Research and Economics

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Issuers of shares and bonds are analysed on the basis of predefined **sustainability factors** and classified in isolation as '**sustainable**' or '**non sustainable**'. For sovereigns, a classification as '**transformation state**' can be made that lies between these two classifications.

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For defined share indices, share price forecasts are made at regular intervals. From the comparison between the current prices and the prepared forecasts on the development of such equity indices, **investment recommendations that are not generally definable and that cannot be defined in advance** may be developed.

4.4 Currency Areas

The assessment of an investment in a **currency area** is geared to the aggregate return expected from an investment in that **currency area**. As a rule, this aggregate return is primarily derived from the forecast change in the exchange rates. Aspects such as the general interest rate level and changes in the yield level of bonds on the relevant bond market that are possibly to be taken into consideration are also included in the assessment.
"**Attractive**" refers to the expectation that an investment in a currency area can deliver an above-average and positive return over a horizon of six to twelve months.
"**Unattractive** " refers to the expectation that an investment in a currency area can deliver only very low returns or even losses over a horizon of six to twelve months.
"**Neutral**" refers to the expectation that an investment in a currency area can deliver low or average returns over a horizon of six to twelve months.
The aforementioned returns are **gross returns**. The gross return as success parameter relates to bond yields before deduction of taxes, remunerations, fees and other purchase costs. This compares with the net return of a specific investment, which is not calculated and can deliver significantly lower returns and which measures the success of an investment in consideration of / after deducting these values and charges.

4.5 The prevailing factor for the **allocation of market segments** and **country weightings for covered bonds** is the comparison between a sub-segment and all the sub-segments on the relevant market as a whole:
"**Overweight** " refers to the expectation that a sub-segment can deliver a significantly better performance than all the sub-segments as a whole.
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"**Neutral weighting**" refers to the expectation that a sub-segment will not deliver any significant performance differences compared with all the sub-segments as a whole.

4.6 Derivatives

For derivatives (**Bund futures, Bobl futures, treasury futures, Buxl futures**) the **arrows** (🡅) (🡇)(➔) **merely indicate the trend direction** and **do not** contain **any investment recommendation**. The trend direction is derived solely from the use of generally recognised technical analysis indicators **without** reflecting **an analyst's own assessment**.

4.7 Commodities

"**Upward arrow** (🡅)" means that the absolute price increase expected in the next twelve months is greater than 10%.
"**Downward arrow** (🡇)" means that the absolute price decline expected in the next twelve months is greater than 10%.

"**Arrow pointing to the right** (➔)" means that the absolute price change expected in the next twelve months will lie between +10% and -10%.

4.8 Credit Trend Issuers
Based on the assessment of the rating development of the agencies and the DZ BANK CRESTA-SCORE forecast model, the following classifications apply:
"**Positive**" is given if the agencies S&P, Moody's and Fitch are expected to make a rating upgrade in the next twelve months,
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"**Stable**" is given if the agencies S&P, Moody's and Fitch are expected to leave their ratings unchanged in the next twelve months
If none of the agencies S&P, Moody's and Fitch have given a rating, no assessment is made of the credit trend for the issuer concerned.

5. Updates and Validity Periods for Other Research Information

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Analyses according to the **value approach**:	one month
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Dividends **(DZ BANK Dividend Aristocrats)**:	three months
Credit trend issuers	twelve months
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Share indices (technical / chart analysis):	one week
Share indices (technical daily):	publicationday
Currency areas:	six to twelve months
Allocation of market segments	one month
Country weightings for covered bonds:	six months
Derivatives	
(Bund futures, Bobl futures, treasury futures, Buxl futures):	one month
Commodities:	one month

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EQUITY SALES	Kai Böckel	+49 – (0)69 – 74 47 – 12 28	kai.boeckel@dzbank.de
Germany	Kai Böckel	+49 – (0)69 – 74 47 – 12 28	kai.boeckel@dzbank.de
Benelux	Lars Wohlers	+49 – (0)69 – 74 47 – 68 34	lars.wohlers@dzbank.de
Switzerland	Petra Bukan	+49 – (0)69 – 74 47 – 49 92	petra.bukan@dzbank.de
Austria	Thomas Reichelt	+49 – (0)69 – 74 47 – 67 09	thomas.reichelt@dzbank.de
UK	Lars Wohlers	+49 – (0)69 – 74 47 – 68 34	lars.wohlers@dzbank.de
SALES TRADING	Marina Semmler	+49 – (0)69 – 74 47 – 13 81	marina.semmler@dzbank.de
DERIVATIVES SALES	Berthold Grünebaum	+49 – (0)69 – 74 47 – 9 91 95	berthold.gruenebaum@dzbank.de

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