

# Financials

A Research Publication by DZ BANK AG



## Methodological approach to financials credit research

### BONDS

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- » DZ Bank's Financials Credit Research is aimed at the local cooperative banks (Volks- und Raiffeisenbanken), institutional clients in Germany and abroad and central banks; forwarding and making it available, by whatever means, to natural and legal persons as well as any other institutions with place of domicile and/or business in the United States of America (USA) is inadmissible and prohibited. The research is generally not suitable for private clients.
- » “**Financials**” is a collective term for banks and insurance companies. Within DZ Bank's Credit Research Financials, unsecured bonds of about 80 financials from Europe, Australia, Canada and the USA are examined and analysed as part of the “**Master List Financials**”.
- » The term “**bonds**” relates in this context and also in the following paragraphs exclusively to the respective issuer's **Euro denominated fixed rate senior unsecured (senior preferred or senior non-preferred) bonds**.
- » The analysis (of bonds) of financials is primarily based on the analyst's assessment of the issuer's creditworthiness. Investment recommendations are based on the assessment of the **approximate risk of default of an issuer** derived from the **fundamental analysis**. For the investment recommendation, the approximate default risk is combined with the expected volatility of the risk premiums.

**Our analyses do not include a credit rating within the meaning of Regulation (EC) No. 1060/2009 of 16 September 2009.**

## THEORETICAL BASIS

Our investment recommendations for bonds issued by financials (banks and insurance companies) are primarily based on a fundamental analysis of the respective issuer and the approximate default risk derived from this analysis. In addition, we also take into account the expected volatility of risk premiums in our system of investment judgements in order to take account of unusual developments and events, so-called idiosyncratic risks. We consider the difference in the yield of an issuer's bonds compared with the swap curve, which is generally regarded as an indicator for the market's assessment of credit risk from the investor's point of view, to be the risk premium or credit spread.

## SUPERORDINATE FACTORS

When carrying out single value analysis in credit research, analysts must also take into account superordinate aspects in addition to the issuer-specific analysis described below. These are influencing factors of a general nature that can affect the credit rating of an issuer and the resulting investment recommendation. The analyst responsible for the relevant issuer must take these influencing factors into consideration accordingly when analysing the individual bonds so that the assessments and recommendations of DZ BANK Research are based on identical assumptions and are consistent in themselves.

The economic forecasts of DZ BANK Research are a key determining factor. Growth rates of GDP and its components, inflation rates, data on the global economy and similar parameters may be of importance when assessing the respective issuer. The interest rate forecast of DZ BANK Research forms a further superordinate reference point for analysing individual values and the resultant recommendations. Political aspects of a global or national nature are an additional point. Worldwide political uncertainties, wars, conflicts or problems in individual countries can also have an influence on the assessment of third-party issuers not directly involved or the recommendation derived from this.

Moreover, new regulatory stipulations, monetary policy and other factors may be relevant for formulating an investment recommendation.

The superordinate forecasts of DZ BANK Research have to be taken into account by analysts when analysing the individual issuers. The respective analyst has to evaluate the effects of the key estimates on their respective object of analysis.

## RELEVANT FACTORS IN THE CREDIT ANALYSIS OF FINANCIALS

The credit analysis of financials is made up of several modules relating to various risk aspects which can cause a default or a bail-in. The individual components are not combined as a kind of model for a credit assessment with a set wording, but are analysed and evaluated individually by the analyst based on his expert knowledge. The depth of the analysis depends very much on what information the individual banks provide.

<sup>1) – 12)</sup> Important: Please read the references to possible conflicts of interest and disclaimers/disclosures at the end of this report.

**» Analysis of the income statement**

A bank's current income should generally be sufficient to support the operating expenses and the expected credit losses. In addition, the bank should try to generate a profit so as to be able to strengthen its equity base after possible distributions to equity providers.

Thus, on the income side, the analyst examines what sources (net interest result, net commission income, trading result, other income), regions and business sectors are particularly relevant for the bank, how they have developed in the short and medium term, what reasons were responsible for this (e.g. whether there were one-time effects or whether the bank took higher risks to achieve them) and how the income will develop in the future.

A similar approach is adopted for expenses. Here too the idea is to "understand" the bank, in particular to separate one-time charges from recurring ones to estimate the future development of expenses.

**» Analysis of the risks of the loan book**

The main source of income, and hence the largest risk factor, of most banks is the lending business. Therefore, the analyst examines the composition of the loan portfolio based on criteria such as loan type, debtor, debtor's registered office, development of the loan book and credit quality over time. In the case of the latter, he especially focuses on the development of the risk provision, net depreciations and loan loss reserves. Moreover, at times the focus of the analysis can be directed at specific lending commitments due to the risk involved, e.g. the bank's exposure to the US subprime sector, in the shipping sector or to the energy industry.

**» Analysis of equity situation**

A bank's equity is designed to absorb unexpected losses and keep the business running. For this purpose, the bank must comply with a large number of regulatory capital requirements, such as Common Equity Tier 1 (CET1) ratio, Tier 1 capital ratio, leverage ratio, and also provide internal buffers that it can fall back on in the event of a crisis. As the calculation of the risk-weighted capital ratios is virtually incomprehensible to outsiders, the analysis in this case is largely limited to the development of the reported ratios and comparison with other banks.

**» Analysis of the liquidity situation**

Analysis of a bank's liquidity and refinancing situation focuses on the sources a bank uses to refinance and the risks involved. Thus, retail deposits are, for example, a relatively stable form of refinancing, while in a crisis it could be that deposits made by institutional customers are withdrawn or short-term capital market refinancing cannot be rolled over. In addition, it is also relevant to what extent the bank has a liquidity portfolio with which interim liquidity shortfalls can be remedied.

The above-mentioned components always relate to data from the past. However, trends may be detected that have to be analysed by the analyst.

A bank's fundamental position depends to a large degree on the economic trend; a slowdown in economic growth, for example, generally leads to rising insolvencies, a higher unemployment rate and falling property prices. This, in turn, is reflected in a rise in risk provisions, a lower demand for credit and an increase in a bank's risk

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assets. Therefore, analysts also use forecasts for future economic trends when assessing a bank's credit standing.

In addition, a number of other factors are crucial to a bank's fundamental development and are therefore also taken into account in the analysis, such as regulatory developments, monetary policy measures or competition intensity, which have an impact on a bank's income, liquidity or equity situation.

## RELEVANT FACTORS WHEN ISSUING INVESTMENT RECOMMENDATIONS

Since 02 June 2020, the Fixed Income Research unit has divided the investment recommendations for issuers that are part of our coverage into the categories "**Low Risk (LR)**", "**Moderate Risk (MR)**" and "**Elevated Risk (ER)**". The investment recommendations relate to Euro denominated senior bonds and are each valid for twelve months, but can be changed at any time. These recommendations are mainly the result of a fundamental analysis of the respective issuer and are therefore initially independent of the relative value of the bonds of the respective issuer. In addition to the fundamental analysis, which is our primary focus, our system of investment judgements also takes into account the expected volatility of risk premiums.

Investment recommendations are based on an assessment of the approximate risk of default of an issuer derived from **fundamental analysis**, which, for example, enables an approximate assessment of the risk of creditors sharing losses. The approximate default risk is combined with the expected fluctuation intensity of the risk premiums, i.e. the spread volatility. This can be lower or higher than in a peer group (as a rule, we use established indices such as the iBoxx Banks Index as a guide). A high spread volatility is not only an expression of a market risk measure, but can also influence the fundamental data via the refinancing costs.

### Low Risk (LR)

The investment recommendation "Low Risk" indicates that we

- a) consider the issuer's default probability on senior bonds to be extremely low based on a three-year horizon and/or
- b) expect low spread volatility of the issuer's Euro denominated senior bonds compared to other issuers in the segment.

Bonds from issuers classified as Low Risk are therefore generally suitable for a longer-term investment and thus as a basic investment in a portfolio.

### Moderate Risk (MR)

The investment recommendation "Moderate Risk" indicates that we

- a) consider the issuer's default probability on senior bonds to be low based on a three-year horizon and/or
- b) expect moderate spread volatility of the issuer's Euro denominated senior bonds compared to other issuers in the segment.

The investment recommendation Moderate Risk differs from Low Risk in that it has a higher risk. Bonds from issuers classified as Moderate Risk are therefore rather suitable as an addition to a portfolio.

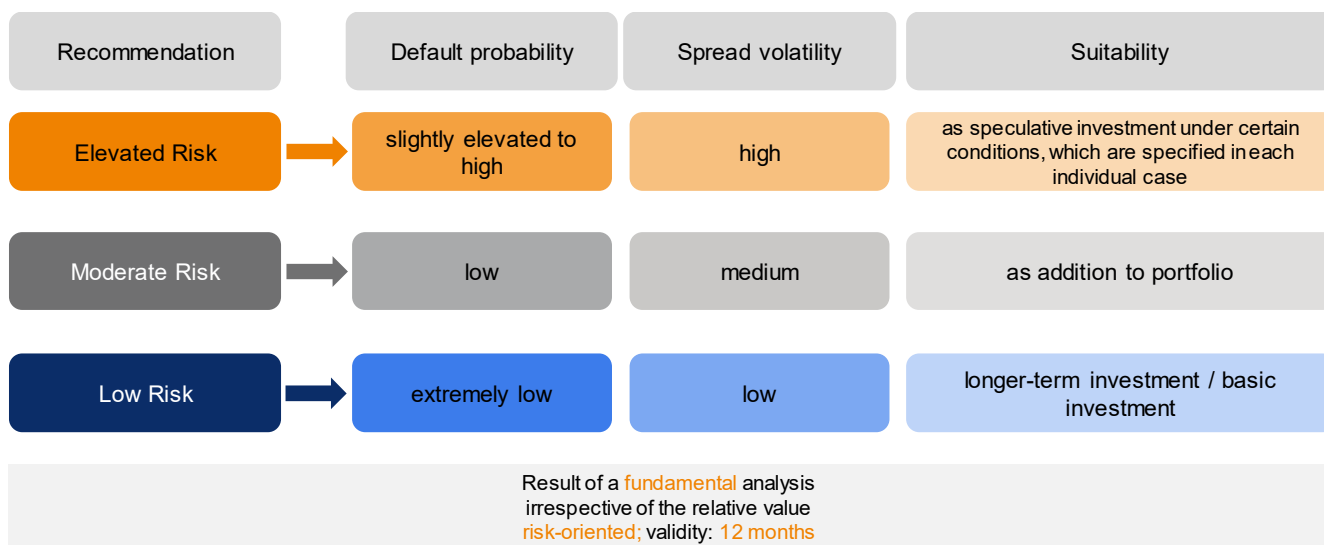
### Elevated Risk (ER)

The investment recommendation “Elevated Risk” indicates that we

- a) consider the issuer’s default probability on senior bonds to be slightly elevated to high based on a three year horizon and/or
- b) expect the spread volatility of the issuer's Euro denominated senior bonds to be higher compared to other issuers in the segment.

The investment rating Elevated Risk is associated with higher risks than the recommendation Moderate Risk. Bonds from issuers classified as Elevated Risk are therefore only suitable as speculative investments under certain conditions, which are specified in each individual case.

#### SYSTEM OF OUR INVESTMENT RECOMMENDATIONS



Source: DZ BANK Research

### SOURCES: DATA, STUDIES, INFORMATION

- » Credit financials analysts refer to a broad range of data and information. Fundamental analysis primarily focuses on original corporate reporting. In addition, a number of other information sources, including reports by the rating agencies Moody’s, S&P and Fitch and news articles from Bloomberg, Reuters and SNL, are used.
- » As the assessment of a bank’s expected fundamental development is mainly determined by the future economic trend (e.g. GDP, unemployment, property markets) in the core markets in which the bank operates, credit financials analysts also rely on the relevant forecasts and expectations of the corresponding analysts at DZ BANK, but also other sources.
- » When assessing other factors which are relevant for evaluating issuers or the expected performance of bonds the analysts draw on other sources, such as legislative texts and regulatory announcements.
- » Analysts mainly obtain data on market indicators, essentially bond and index data, from Bloomberg, Reuters and Markit.

<sup>1) – 12)</sup> Important: Please read the references to possible conflicts of interest and disclaimers/disclosures at the end of this report.

As the analysis of issuers/bank bonds is extremely complex, it is a matter of filtering out from the abundance of offerings available the information that will ultimately decides on the default risk of an issuer with regard to its senior bonds and the development of a bank bond.

## I. IMPRINT

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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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## II. MANDATORY DISCLOSURES FOR FINANCIAL ANALYSES AND FURTHER REMARKS

### 1. Responsible Company

**1.1** This **Financial Analysis** has been prepared by **DZ BANK AG Deutsche Zentral-Genossenschaftsbank, Frankfurt am Main (DZ BANK)** as an investment firm.

**Financial analyses** are **independent client information** containing **generic investment recommendations** regarding **specific issuers** or **specific financial instruments**, but they do not make allowance for any individual investment criteria.

**1.2** The **mandatory disclosures** for **Research Publications** (Financial Analyses and Other Research Information) as well as **further remarks**, especially the **Conflicts of Interest Policy** of **DZ BANK Research**, regarding **used methods, procedures, and statistics**, can be **read and downloaded free-of-charge** under [www.dzbank.com/disclosures](http://www.dzbank.com/disclosures).

### 2. Competent Supervisory Authorities

DZ BANK is supervised as a credit institution and as an investment firm by:

– **European Central Bank** - [www.ecb.europa.eu](http://www.ecb.europa.eu)

Sonnemannstraße 20 in 60314 Frankfurt / Main and

– **Federal Financial Supervisory Authority (BaFin)** - [www.bafin.de](http://www.bafin.de)

Marie-Curie-Straße 24 - 28 in 60439 Frankfurt / Main

Regarding Research Publications (Financial Analyses and Other Research Information) the DZ BANK linked **local cooperative banks are supervised by:**

– **Federal Financial Supervisory Authority (BaFin)** - [www.bafin.de](http://www.bafin.de)

Marie-Curie-Straße 24 - 28 in 60439 Frankfurt / Main

### 3. Independent Analysts

**3.1** The **Research Publications** (Financial Analyses and Other Research Information) of DZ BANK are independently prepared by its employed analysts or by competent analysts commissioned in a given case on the basis of the binding **Conflicts of Interest Policy**.

**3.2** Each analyst involved in the preparation of the contents of this Research Publication confirms that

- this Research Publication represents his independent specialist evaluation of the analysed object in compliance with the Conflicts of Interest Policy of DZ BANK and
- his compensation depends neither in full nor in part, neither directly nor indirectly, on an opinion expressed in this Research Publication.

### 4. Definitions of the Categories for Investment Recommendations in Financial Analyses

The **categories for investment recommendations in Financial Analyses** of DZ BANK are defined as follows:

#### 4.1 Shares:

##### - Fundamental Analysis:

**"Buy"** means that the absolute appreciation expected in the next twelve months is greater than 10%.

**"Sell"** means that the absolute depreciation expected in the next twelve months is greater than 10%.

**"Hold"** means that the absolute *price* volatility expected in the next twelve months lies between +10% and -10%.

#### 4.2 Fixed Income Instruments:

##### 1. Government Bonds, SSAs, Financials and Corporate Bonds

The terms **"Low Risk"**, **"Moderate Risk"** and **"Elevated Risk"** are used as investment ratings when assessing individual issuers from the market segments Government Bonds, Agency Bonds, Financials (senior unsecured) and Corporate Bonds (senior unsecured). The classifications are independent of overriding allocation recommendations for market segments (cf. mandatory disclosures on other research information at

[www.dzbank.de/mandatory-disclosures](http://www.dzbank.de/mandatory-disclosures)). This estimate is based on DZ BANK's expectations regarding the probability of default and/or the relative volatility of risk premiums over the next three years (cf. DZ BANK methodological studies at [www.dzbank.de/mandatory-disclosures](http://www.dzbank.de/mandatory-disclosures)).

The investment recommendation **"Low Risk"** indicates that DZ BANK a) considers the issuer's probability of default to be extremely low over a three-year period and/or b) expects a low spread volatility of the issuer's (senior) bonds denominated in EUR compared with other issuers in the segment. Senior bonds denominated in EUR from issuers classified as "Low Risk" are therefore generally suitable for longer-term investments and thus qualify as a basic investment in a portfolio.

The investment recommendation **"Moderate Risk"** indicates that DZ BANK a) considers the issuer's probability of default to be low over a three-year period and/or b) expects a moderate spread volatility of the issuer's (senior) bonds denominated in EUR compared with other issuers in the segment. Senior bonds denominated in EUR from issuers classified as "Moderate Risk" are suitable as an addition to a portfolio.

The investment recommendation **"Elevated Risk"** indicates that DZ BANK a) considers the issuer's probability of default is slightly elevated to high over a three-year period and/or b) expects a higher spread volatility of the issuer's (senior) bonds denominated in EUR compared with other issuers in the segment. Senior bonds denominated in EUR from issuers classified as "Elevated Risk" are only suitable as a speculative investment under certain conditions specified in individual cases.

##### 2. Covered Bonds

When assessing an issuer's covered bond programme, the terms **"Outperformer"**, **"Market Performer"** and **"Underperformer"** are used as investment recommendation. The investment recommendation is based on DZ BANK's assessment of whether the credit spread return of an issuer's covered bonds will perform better than the market ("Outperformer"), perform worse than the market ("Underperformer") or perform in line with the market ("Market Performer") for bonds of comparable covered bond programmes over the next six months. The recommendation categories refer to covered bonds ("covered bank bonds") in EUR and are only valid for the publication date. Since issuers have usually issued a large number of bonds, the expected credit return cannot be quantified (cf. DZ BANK methodological studies at [www.dzbank.de/mandatory-disclosures](http://www.dzbank.de/mandatory-disclosures)).

#### 5 Categories for isolated statements without investment recommendation

Statements on the **isolated evaluation of specific aspects** that **precede an investment recommendation** on a financial instrument and / or an issuer - especially according to the **sustainability criteria** defined by DZ BANK, its defined **value approach**, its defined **asset allocation** (DZ BANK Sample Portfolio), its defined sector strategy Euro-Stoxx (**DZ BANK Sector Favorites**), its defined valuation of payments to beneficiaries (**DZ BANK Dividend Aristocrats**), their **weighting recommendations for market**

<sup>1)</sup> – <sup>12)</sup> Important: Please read the references to possible conflicts of interest and disclaimers/disclosures at the end of this report.

segments or otherwise defined groups of different issuers, i.e. their **weighting recommendations in the overall market strategy Fixed Income**, in the *sector strategy Corporates* and their **weighting recommendations for covered bond jurisdictions** - are **not investment categories** and therefore **do not contain any investment recommendations**.

These isolated statements **alone** are **not sufficient** to form the basis of an investment decision. Reference is made to the explanation of the used relevant methods.

In the case of recommendations on market segments or otherwise defined groups of different issuers, the terms "**Overweight**", "**Underweight**" and "**Neutral weight**" are used.

"**Overweight**" means that the aforementioned bond segment is expected to perform significantly better on a six-month horizon than the average of the other bond segments in coverage, both in the event of a positive and negative overall market trend.

"**Underweight**" means that the aforementioned bond segment is expected to perform significantly worse on a six-month horizon than the average of the other bond segments in coverage, both in the event of a positive and negative overall market trend.

"**Neutral weight**" means that the bond segment in question is expected to perform approximately in line with the average of the other bond segments in the coverage over a six-month period.

The weighting recommendations for market segments or otherwise defined groups of different issuers are independent of the recommendations for individual issuers or those of superordinate or subordinate market segments. They are relative, i.e. if not all the segments mentioned are weighted "neutral", at least one bond segment is rated "overweight" and one bond segment is rated "underweight". Accordingly, the weighting recommendations are not an absolute statement about profit and loss (cf. DZ BANK methodological studies at [www.dzbank.de/mandatory-disclosures](http://www.dzbank.de/mandatory-disclosures)).

#### 5.1 Overall market strategy

The weighting recommendations in the overall Fixed Income market strategy refer to the comparison of bond segments relative to one another. There are currently five bond segments in the overall market strategy: 1. Government Bonds, 2. Agency Bonds, 3. Covered Bonds, 4. Bank Bonds (senior unsecured), 5. Corporate Bonds (senior unsecured). Calculations of the total return are decisive for the expected performance. The weighting recommendations in the overall market strategy are independent of the weighting recommendations within the individual bond segments themselves, because the respective peer group within each individual bond segment is a completely different one. For example, weighting recommendations within government bond sector refer to issuer countries in relation to each other, which have no relevance at the level of weightings in the overall market strategy.

#### 5.2 Sector strategy corporate bonds

In the corporate bond segment, we summarise the relative performance we expect of a sector in comparison with the developments forecast for the other sectors in a sector assessment. Calculations of the credit spread return are decisive for the expected performance.

#### 5.3 Strategy covered bonds

Our weighting recommendations for Covered Bond jurisdictions ("country") are based on a comparison of the respective country segment (sub-index within the iBoxx € Covered Index) with the total index (iBoxx € Covered Index). The credit spread return is decisive for the expected performance.

### 6. Scheduled Updates and Validity Periods of Investment Recommendations

**6.1** The frequency of **updates of Financial Analyses** depends in particular on the underlying macroeconomic conditions, current developments on the relevant markets, the current development of the analyzed companies, measures undertaken by the issuers, the behavior of trading participants, the competent supervisory authorities and the competent central banks as well as a wide range of other parameters. The periods of time named below therefore merely provide a **non-binding indication** of when an updated investment recommendation may be expected.

**6.2** **No obligation exists to update an investment recommendation.** If an investment recommendation is updated, this update **replaces** the previous **investment recommendation with immediate effect**.

If no update is made, investment recommendations **end / lapse on expiry of the validity periods** named below. These periods **begin** on the **day** and at the **time** the investment recommendation is **completed**.

**6.3** The **validity periods** for investment recommendations (**financial analyses**) are as follows:

#### Shares:

Fundamental analysis six months

#### Fixed income instruments:

Government bonds twelve months

SSAs twelve months

Financials (senior unsecured) twelve months

Corporate Bonds (senior unsecured) twelve months

Covered Bonds one trading day

**6.4** **Evaluations of isolated aspects without investment recommendation**

have the following validity periods:

#### Sustainability analyses:

Analyses according to the **value approach**: one month

Asset allocation analyses (**DZ BANK Sample Portfolio**): one month

Euro Stoxx sector strategy (**DZ BANK Sector Favorites**): one month

Dividends (**DZ BANK Dividend Aristocrats**): three months

**Credit Trend Issuers** twelve months

**Share indices (fundamental)**: three months

**Currency areas**: six to twelve months

**Weighting recommendations for market segments** six months

**Overall market strategy** six months

**Sector strategy Corporate Bonds** six months

**Strategy Covered Bonds**: six months

#### Derivatives:

(Bund futures, Bobl futures, treasury futures, Buxl futures): one month

**Commodities**: one month

**6.5** In a given case, updates of analyses may also be **temporarily suspended without prior announcement** on account of compliance with supervisory regulations.

**6.6** If **no updates are to be made in the future** because the analysis of an object is to be discontinued, notification of this shall be made in the final publication or, if no final publication is made, the close of the analysis shall be given in a separate note.

### 7. General Overview of Investment Recommendations on Financial Instruments and Issuers

Each working day DZ BANK prepares a **general overview of all investment recommendations** on financial instruments and / or issuers disseminated in the last **twelve months**, containing all details specified by the supervisor. This list can be **read and downloaded free-of-charge** under [www.dzbank.com/disclosures](http://www.dzbank.com/disclosures).

### 8. Avoiding and Managing Conflicts of Interest

**8.1** DZ BANK Research has a binding **Conflicts of Interest Policy** which ensures that the relevant conflicts of interest of DZ BANK, the DZ BANK Group, the analysts and employees of the Research and Economics Division and persons closely associated with them are avoided, or - if such interests are effectively unavoidable - are appropriately identified, managed, disclosed and monitored. Material aspects of this policy, which can be **read and downloaded free-of-charge** under [www.dzbank.com/disclosures](http://www.dzbank.com/disclosures) are summarized as follows.

**8.2** DZ BANK organizes its Research and Economics Division as a confidentiality area and protects it against all other organizational units of DZ BANK and the DZ BANK Group by means of Chinese walls. The departments and teams of the Division that produce Financial Analyses are also protected by Chinese walls and by spatial separation, a closed doors and clean desk policy. Beyond the limits of these confidentiality areas, communication may only take place in both directions according to the need-to-know principle.

**8.3** The Research and Economics Division does not disseminate Research Publications on issues of DZ BANK or on financial instruments issued by companies of the DZ BANK Group.

**8.4** **In principle, employees of the Research and Economics Division and persons closely associated with them may not unrestrictedly invest in financial instruments covered by them in the form of Financial Analyses. For commodities and currencies, DZ BANK has also defined an upper limit based on the annual gross salary of each employee which, in the opinion of DZ BANK, also excludes the possibility of personal conflicts of interest among employees in the preparation of Other Research Information.**

**8.5** Other theoretically feasible, information-based personal conflicts of interest among employees of the Research and Economics Division and persons

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closely associated with them are avoided in particular by the measures explained in **sub-paragraph 8.2** and the other measures described in the policy.

- 8.6** The remuneration of employees of the Research and Economics Division depends neither in whole nor in the variable part directly or materially on the earnings from investment banking, trade in financial instruments, other securities related services and / or trade in commodities, merchandise, currencies and / or on indices of DZ BANK or the companies of the DZ BANK Group.
- 8.7** DZ BANK and companies of the DZ BANK Group issue financial instruments for trading, hedging and other investment purposes which, as underlying instruments, may refer to financial instruments, commodities, merchandise, currencies, benchmarks, indices and / or other financial ratios also covered by DZ BANK Research. Respective conflicts of interest are primarily avoided in the Research and Economics Division by means of the aforementioned organizational measures.
- 8.8** **Investment recommendations for the same financial instrument / issuer that have deviated in the last 12 months are stated in the respective current Financial Analysis together with the relevant investment recommendation category and date.**
- 8.9** The **quarterly information** on the share of the investment categories stated in **sub-paragraph 4.1 and 4.2 for shares and fixed income instruments** in the total number of investment recommendations of DZ BANK and the **information** on the share of these categories relating to the issuers to whom DZ BANK has rendered services in the **past twelve months** in accordance with Appendix I Sections A and B of Directive 2014/65/EU, can be **read and downloaded free-of-charge** under **www.dzbank.com/disclosures**.
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- 1)** DZ BANK owns a **net long position** exceeding 0,5% of the total issued share capital of the issuer, calculated according to Article 3 of Regulation (EU) No. 236/2012 and Chapter III and IV of Commission Delegated Regulation (EU) No. 918/2012.
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  - 3)** DZ BANK or any of its affiliates beneficially **owns 1 % or more** of any class of common equity securities of the issuer.
  - 4)** The issuer holds shares of DZ BANK exceeding 5 % of its total issued share capital.
  - 5)** DZ BANK, any of its affiliates or a natural or legal person involved in the preparation of the investment recommendation acting under contract, is a **market maker, designated sponsor and / or liquidity provider** in financial instruments of the issuer at the time of publication of this research report.
  - 6)** DZ BANK, any of its affiliates or a natural or legal person involved in the preparation of the investment recommendation acting under contract, has **managed or co-managed a private and / or publicly disclosed offering** of financial instruments of the issuer in the past 12 months.
  - 7)** The issuer is or has been a **client** to DZ BANK regarding **investment banking services** over the 12-month period preceding the date of publication of this research report.
  - 8)** DZ BANK or any of its affiliates received **compensation for investment banking services** from the issuer in the past 12 months.
  - 9)** DZ BANK or any of its affiliates expects to receive or intends to seek **compensation for investment banking services** from the issuer in the next 3 months.
  - 10)** The issuer is or has been a **client** to DZ BANK, to any of its affiliates or a natural or legal person involved in the production of the investment recommendation acting under contract regarding **securities-related services** as set out in Sections A and B of Annex I of Directive 2014/65/EU, which agreement has been in effect or has given rise to the obligation to pay or receive compensation during the 12-months period preceding the date of publication of this research report.
  - 11)** The issuer is or has been a **client** to DZ BANK regarding **non-securities services** over the 12-month period preceding the date of publication of this research report.

- 12)** DZ BANK and / or any of its affiliates have been a party to an **agreement** with the issuer relating to the **preparation of investment recommendations** concerning financial Instruments issued by him.

## 9. Recipients and Use of Financial Analyses

### 9.1 Recipients

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## 10. FIXED INCOME RESEARCH: RECOMMENDATION CHANGES WITHIN THE LAST 12 MONTHS

ABN AMRO Bank	18.09.2019	Underperformer	HeidelbergCement	21.01.2020	Outperformer	Total	11.09.2019	Marketperformer
Achmea Bank	02.12.2019	Underperformer	Henkel	02.12.2019	Underperformer	Toyota Motor	02.12.2019	Marketperformer
Adolf Würth GmbH & Co. KG	02.12.2019	Marketperformer	Hochtief	23.01.2020	Marketperformer	UBS Group	18.09.2019	Underperformer
Aegon	07.10.2019	Marketperformer	Hochtief	09.09.2019	Outperformer	UBS Group	25.06.2019	Outperformer
Ahold Delhaize	14.05.2020	Marketperformer	HSBC Holdings	18.09.2019	Marketperformer	Unibail-Rodamco-Westfield	20.04.2020	Marketperformer
AIB Group	13.12.2019	Marketperformer	HSBC Holdings	23.05.2019	Underperformer	Unicredit	26.02.2020	Marketperformer
AIB Group	18.09.2019	Underperformer	HYPONOE	02.12.2019	Underperformer	Unicredit	30.08.2019	Outperformer
AIB Group	11.09.2019	Marketperformer	IBM	02.12.2019	Outperformer	Unicredit	03.06.2019	Underperformer
AIB Group	23.05.2019	Underperformer	ING Groep	18.09.2019	Underperformer	Unilever N.V.	12.02.2020	Underperformer
Airbus	02.12.2019	Marketperformer	Intesa Sanpaolo	26.02.2020	Marketperformer	Vattenfall	02.12.2019	Marketperformer
Akzo Nobel	23.04.2020	Marketperformer	Intesa Sanpaolo	30.08.2019	Outperformer	Veolia Environnement	02.12.2019	Underperformer
Allianz	30.10.2019	Underperformer	Intesa Sanpaolo	03.06.2019	Underperformer	Vodafone Group	14.06.2019	Marketperformer
America Movil	17.07.2019	Outperformer	Italy	29.08.2019	Outperformer	Vonovia	12.05.2020	Outperformer
Amgen	28.11.2019	Marketperformer	Italy	03.06.2019	Underperformer	Wells Fargo	02.12.2019	Marketperformer
Anheuser-Busch InBev	03.03.2020	Marketperformer	JPMorgan Chase & Co.	17.04.2020	Outperformer	Westpac Banking Corp.	18.09.2019	Marketperformer
Apple	04.02.2020	Outperformer	JPMorgan Chase & Co.	18.09.2019	Marketperformer	Zurich Insurance Group	29.11.2019	Underperformer
AT&T	02.12.2019	Marketperformer	JPMorgan Chase & Co.	25.06.2019	Outperformer			
Australia and New Zealand Banking Group	18.09.2019	Marketperformer	KBC Groep	18.09.2019	Underperformer			
Austria	29.08.2019	Underperformer	KBC Groep	25.06.2019	Outperformer			
Austria	25.06.2019	Marketperformer	Koninklijke KPN	24.07.2019	Marketperformer			
AXA	02.12.2019	Marketperformer	LafargeHoldim	07.04.2020	Outperformer			
Bank of America	23.04.2020	Outperformer	LafargeHoldim	06.03.2020	Marketperformer			
Bank of America	18.09.2019	Marketperformer	LafargeHoldim	27.02.2020	n.a.			
Bank of America	25.06.2019	Outperformer	Landesb. Baden-Württemberg	02.12.2019	Underperformer			
Bank of Ireland Group	13.12.2019	Marketperformer	Landesbank Hessen-Thüringen	02.12.2019	Underperformer			
Bank of Ireland Group	18.09.2019	Underperformer	Linde PLC	08.05.2020	Marketperformer			
Bank of Ireland Group	11.09.2019	Marketperformer	Lloyds Banking Group	13.12.2019	Marketperformer			
Bank of Ireland Group	23.05.2019	Underperformer	Lloyds Banking Group	23.05.2019	Underperformer			
Bank of Nova Scotia	02.12.2019	Underperformer	Lufthansa	24.04.2020	Underperformer			
Barclays PLC	13.12.2019	Marketperformer	Lufthansa	26.03.2020	Marketperformer			
Barclays PLC	23.05.2019	Underperformer	Lufthansa	24.02.2020	Underperformer			
BASF	26.03.2020	Marketperformer	Merck KGaA	10.03.2020	Marketperformer			
Bayerische Landesbank	02.12.2019	Marketperformer	Microsoft	24.02.2020	Outperformer			
BayWa	02.12.2019	Marketperformer	Mondelez International	13.05.2020	Outperformer			
Belfius Bank	18.09.2019	Underperformer	Mondelez International	31.07.2019	Marketperformer			
Belfius Bank	25.06.2019	Outperformer	Munich Re	02.12.2019	Underperformer			
Belgium	19.11.2019	Marketperformer	National Australia Bank	18.09.2019	Marketperformer			
Belgium	29.08.2019	Underperformer	Nationwide Building Society	13.12.2019	Marketperformer			
Belgium	25.06.2019	Outperformer	Nationwide Building Society	22.11.2019	Underperformer			
Berlin Hyp	25.06.2019	Marketperformer	Nestlé	02.12.2019	Marketperformer			
BNP Paribas	14.02.2020	Marketperformer	Netherlands	29.08.2019	Underperformer			
BP	09.03.2020	Underperformer	Netherlands	25.06.2019	Marketperformer			
BPCE	25.06.2019	Marketperformer	NORD/LB Girozentrale	02.12.2019	Marketperformer			
BT Group	11.09.2019	Underperformer	Nordea Bank Abp	18.09.2019	Underperformer			
Carrefour	29.10.2019	Marketperformer	Nordea Bank Abp	25.06.2019	Outperformer			
Carrefour	11.09.2019	Outperformer	Novartis	02.12.2019	Marketperformer			
Carrefour	18.07.2019	Marketperformer	Nykredit Realkredit	02.12.2019	Underperformer			
Carrefour	27.05.2019	Outperformer	OMV	09.03.2020	Marketperformer			
Caterpillar	02.12.2019	Marketperformer	OMV	02.12.2019	Underperformer			
CEZ	27.03.2020	Outperformer	OP Corporate Bank	18.09.2019	Underperformer			
Citigroup	02.12.2019	Marketperformer	OP Corporate Bank	25.06.2019	Outperformer			
Commonwealth Bk of Australia	18.09.2019	Marketperformer	Orange	31.03.2020	Outperformer			
Coöperatieve Rabobank UA	18.09.2019	Underperformer	PepsiCo	20.02.2020	Marketperformer			
Coöperatieve Rabobank UA	25.06.2019	Outperformer	Petrobras	02.08.2019	Marketperformer			
Crédit Agricole	25.06.2019	Marketperformer	Peugeot SA	30.10.2019	Marketperformer			
Crédit Mutuel Arkéa SACC	25.06.2019	Outperformer	Pfizer	18.10.2019	Marketperformer			
Credit Suisse Group	18.09.2019	Underperformer	Portugal	25.06.2019	Marketperformer			
Credit Suisse Group	25.06.2019	Outperformer	Procter & Gamble	30.09.2019	Marketperformer			
Danone	06.03.2020	Marketperformer	Renault	21.10.2019	Underperformer			
Danone	25.07.2019	Underperformer	Repsol	09.03.2020	Underperformer			
Danske Bank	28.11.2019	Underperformer	Repsol	20.11.2019	Marketperformer			
DekaBank	02.12.2019	Marketperformer	Rio Tinto Ltd.	02.12.2019	Outperformer			
Deutsche Bank	08.07.2019	Outperformer	RLB Niederösterreich	02.12.2019	Marketperformer			
Deutsche Bank	25.06.2019	Marketperformer	RLB Oberösterreich	23.10.2019	Marketperformer			
Deutsche Pfandbriefbank	25.06.2019	Marketperformer	Robert Bosch GmbH	02.12.2019	Underperformer			
De Volksbank	18.09.2019	Underperformer	Roche	11.02.2020	Marketperformer			
De Volksbank	25.06.2019	Outperformer	Roche	02.12.2019	Outperformer			
Dexia Group	02.12.2019	Underperformer	Rolls-Royce Holdings	12.03.2020	Underperformer			
DNB Bank	18.09.2019	Underperformer	Royal Bank of Canada	02.12.2019	Underperformer			
DNB Bank	25.06.2019	Outperformer	Royal Bank of Scotland Group	13.12.2019	Marketperformer			
E.ON	17.09.2019	Marketperformer	Royal Bank of Scotland Group	23.05.2019	Underperformer			
Enel	03.06.2019	Underperformer	Royal Dutch Shell	29.11.2019	Marketperformer			
ENGIE	02.12.2019	Marketperformer	RWE	02.12.2019	Marketperformer			
ENI	09.03.2020	Marketperformer	Saint-Gobain	01.10.2019	Marketperformer			
ENI	03.06.2019	Underperformer	Sanofi	02.12.2019	Marketperformer			
Equinor	26.09.2019	Marketperformer	SBAB Bank	02.12.2019	Underperformer			
Erste Group Bank	18.09.2019	Underperformer	Schlumberger	09.03.2020	Underperformer			
EWE	02.12.2019	Marketperformer	Schlumberger	28.01.2020	Marketperformer			
Féd. des caisses Desjardins	02.12.2019	Marketperformer	SEB	18.09.2019	Underperformer			
Finland	19.11.2019	Underperformer	SEB	25.06.2019	Outperformer			
Finland	25.06.2019	Marketperformer	Siemens	01.08.2019	Marketperformer			
Ford Motor	19.02.2020	Underperformer	Société Générale	18.09.2019	Marketperformer			
France	29.08.2019	Marketperformer	Sparebank 1 SMN	02.12.2019	Underperformer			
France	25.06.2019	Outperformer	Sparebank 1 SR-Bank	02.12.2019	Underperformer			
Fresenius SE & Co. KGaA	31.07.2019	Marketperformer	Sparebank 1 Østlandet	02.12.2019	Underperformer			
General Electric	11.05.2020	Underperformer	Sparebanken Vest	02.12.2019	Underperformer			
General Electric	11.11.2019	Marketperformer	Standard Chartered	02.12.2019	Marketperformer			
General Electric	16.08.2019	Underperformer	SUEZ	05.03.2020	Marketperformer			
Germany	29.08.2019	Underperformer	Svenska Handelsbanken	18.09.2019	Underperformer			
Germany	25.06.2019	Marketperformer	Svenska Handelsbanken	25.06.2019	Outperformer			
GlaxoSmithKline	09.09.2019	Marketperformer	Swedbank	02.12.2019	Underperformer			
Goldman Sachs Group	25.06.2019	Marketperformer	Swiss Re	13.11.2019	Underperformer			
Greece	29.08.2019	Outperformer	Telenor	30.04.2020	Marketperformer			
Greece	25.06.2019	Marketperformer	Telenor	07.04.2020	n.a.			
GRENKE	03.09.2019	Marketperformer	Telia Company	02.12.2019	Underperformer			
Hamburg Commercial Bank	07.05.2020	Marketperformer	Telstra Corp	15.01.2020	Marketperformer			
Hamburg Commercial Bank	02.12.2019	Outperformer	The Kraft Heinz Company	27.03.2020	Underperformer			
Hannover Rück	21.11.2019	Underperformer	thyssenkrupp	28.02.2020	Marketperformer			
HeidelbergCement	07.04.2020	Marketperformer	Total	09.03.2020	Outperformer			

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