Sustainable Investments

A Research Publication by DZ BANK AG

Sustainability in focus: Deutsche Hypo plans to issue a "Green Pfandbrief" (Green Covered Bond)

The facts: Deutsche Hypo announced on 25 October 2017 that it intends to issue a Eurodenominated "Green Pfandbrief" (Green Covered Bond) in a volume of EUR 500 million. The proceeds from the "Green Pfandbrief" are used exclusively to finance assets in accordance with Deutsche Hypo's Green Bond Framework. This is financing energyefficient buildings (Green Buildings) such as new buildings, replacements of old buildings, project developments, certified portfolio financing and renovation work to improve a building's energy efficiency.

Sustainability assessment: Deutsche Hypo achieves 57 points in our "EESG" rating model (average for the entire universe: 44 points; sector sustainability threshold: 52 points), is classified as "sustainable", and has received the DZ BANK Seal of Quality for Sustainability 10/2017 accordingly. Our model calculates a positive economic sustainability factor of 1.05. In the first half of 2017, Deutsche Hypo reported stable profitability and a continued good risk position in its core business area of commercial real estate financing, growing new business by 17.4% year-on-year despite a competitive situation that remains challenging. Sustainability is anchored within Deutsche Hypo's operating business on both the asset and liability sides. The bank offers a number of products and services with ecological and/or social use or benefit. Stringent sustainability criteria are applied within the core business, commercial real estate financing. For this purpose, the bank evaluates investments according to financial, building-law and ecological aspects as part of risk management. The sustainability topic is strategically anchored at Managing Board level at Deutsche Hypo. To this end, the Managing Board has declared the professionalisation of sustainability management as a central objective within the bank. The sustainability management function, which is situated within the communications department and forms part of the Managing Board's staff, is responsible for implementing this aim. It is supported by a sustainability group consisting of members of the bank's departments that have more extended involvement with sustainability.

Conclusion: Deutsche Hypo exhibits above-average performance in all four of the sustainability dimensions we analyse. Evaluating ecological, social and long-term economic impacts of products and services forms an essential role in appraising issuers in our "EESG" analysis model. Refinancing loans within their sustainability strategy through issuing a sustainable bond would exert a positive impact on the "Sustainability in the operating business" core indicator we analyse. Especially the economic sub-indicators of "Socially responsible financing and funding" and "Contribution of products and services to the Sustainable Development Goals" are impacted positively. This analysis is not connected with any assessment of the bond itself.

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SUSTAINABILITY ASSESSMENT:

Sustainability at a glance

Deutsche Hypo achieves 57 points in our EESG rating model. The average for the entire universe currently amounts to 44 points. The sector sustainability threshold for banks lies at 52 points at present. Deutsche Hypo does not violate exclusion criteria and is not involved in any severe EESG controversies. Accordingly, Deutsche Hypo is classified as "sustainable" and has received the DZ BANK Seal of Quality for Sustainability 10/2017. Our model calculates a positive economic sustainability factor of 1.05.

SUSTAINABILITY RATING (EESG)

Sustainability Rating (EESG)	57/100
Peer Group	Banks
Sector-specific sustainability threshold Cross-sector sustainability threshold	52 44
Violation of exclusion criteria	No
Current, serious EESG controversies	No
Part of DZ BANK Sustainable Investment Universe	Yes

EESG score 57/100 points

Classification: Sustainable

Source: DZ BANK Sustainable Investment Research (2017)

DZ BANK SEAL OF QUALITY FOR SUSTAINABILITY

Source: DZ BANK Sustainable Investment Research (2017)

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SEAL OF QUALITY FOR SUSTAINABILITY Deutsche Hypo
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Sustainability SWOT

Strengths	Weaknesses
German real estate bank with European orientation and presence at important national and international locations	Management compensation is not (yet) explicitly tied to sustainability targets
The business model is based on the German Covered Bond Act (PfandBG), including in joint liability with German regional banks (Landesbanks) and saving banks (Sparkassen)	
Established capital market business	
Positive ecological, social and economic impact of products and services	
Sustainability topic strategically anchored at top management level	
Opportunities	Risks
Broadening of investor base through regular Green Bond issues	Unexpected defaults in commercial real estate finance area
Positive contribution to Sustainable Development Goals and global climate targets	Stronger than expected margin pressure in commercial real estate financing and rising loan-to-value ratios in new business
Further increase in real estate prices and rise in transaction volumes	End of positive real estate cycle
	Potential change of owner

Source: DZ BANK Sustainable Investment Research (2017)

GREEN BOND AT A GLANCE

Facts about the issue

Deutsche Hypo announced on 25 October 2017 that it intends to issue a Euro-Volume: EUR 500 million denominated "Green Pfandbrief" (Green Covered Bond) in a volume of EUR 500 million. The issue proceeds from the "Green Pfandbrief" are to be used exclusively to finance Green Bond Framework assets in accordance with Deutsche Hypo's Green Bond Framework. **Refinancing products** When issuing Green Bonds, Deutsche Hypo funds itself through bonds whose raised In focus: Green Buildings funds are used exclusively to finance energy-efficient (i.e. green) buildings, such as new buildings, replacements of old buildings, project developments, certified portfolio financing and renovation work to improve a building's energy efficiency. The Bank issues unsecured bonds as well as Pfandbriefe as green bonds. The **Unsecured bonds / Covered bonds** Pfandbriefe it issues fulfil all requirements under the German Pfandbrief Act. Senior (Pfandbriefe) unsecured bonds issued as green bonds are pari passu with other bonds of the same asset class, which may include issues in benchmark format as well as smaller volumes (private placements). Adequate volume of Green Buildings An adequate volume of suitable Green Buildings is available for the issued bonds. Funding by way of green bonds may only be carried out to the minimum extent that the Bank has Green Buildings in its portfolio. Temporary fractional amounts can be invested on a temporary/adequate basis. Use of proceeds The funds raised through the issue of Green Bonds are used exclusively to finance **Energy-efficient real estate** energy-efficient real estate. The proceeds can be used to finance Green Buildings both in new business and in New and existing buildings existing business. Financing is geared towards the construction, project development, acquisition or energy-efficient renovation of buildings. The exact use of the proceeds is defined in the final terms of the respective bond issue. **Eligible projects** The energy efficiency of a property to be financed, and therefore its suitability as an Multi-stage evaluation process asset for a Green Bond, is evaluated in a multi-stage process. The requirements derived from the process in relation to acquisition, loan processing and Treasury are embedded in Deutsche Hypo's guidelines and are therefore binding for all employees. The suitability of a financing for a Green Bond issue and the related features, such Credit management and treasury as quantified energy efficiency, are recorded and managed in the Bank's portfolio management system. The employees in the lending department (Credit Management) record all the necessary data (such as energy passes, certificates, etc.) of the financing in the Bank's IT systems. On the basis of defined criteria, using

the four eyes principle, Treasury will then review whether the financed real estate is suitable for inclusion in the real estate portfolio for a Green Bond issue.

The applicable criteria are determined by a Green Building Commission which is comprised of members of the sustainability circle that supports the sustainability management team in its tasks. The Green Building Commission defines the Green Bond Minimum Standards (short: GBMS) and ensures in its regular meetings that the minimum standards required in the target markets are at least complied with. An asset is categorised as a Green Building if the applicable GBMS are fulfilled at the time of inclusion of the financing in the Green Bond portfolio.

The currently applicable GBMS are as follows:

- Energy pass with a maximum final energy demand or consumption (heat) in kWh/(m²*a) by asset class:
 - 50 kWh/(m²*a) for new residential properties
 - . 75 kWh/(m²*a) for old residential properties
 - 30 kWh/(m²*a) for logistics buildings
 - 70 kWh/(m²*a) for retail buildings (shopping malls, department stores)
 - 95 kWh/(m²*a) for other retail buildings
 - 95 kWh/(m²*a) for hotel buildings (up to 3 star hotels)
 - 105 kWh/(m²*a) for hotel buildings (4 to 5 star hotels)
 - 110 kWh/(m²*a) for production and storage buildings (with heating)
 - 110 kWh/(m²*a) for office buildings without air conditioning
 - 135 kWh/(m²*a) for office buildings with air conditioning
- or green building certification:
 - LEED Silver or above
 - BREEAM Good or above
 - DGNB Silver or above (for certificates given after 1 July 2015: Gold or above)
 - . HQE Basic or above

The primary energy demand or consumption (warmth) should be used for valuation if the use of renewable energy reduces the primary energy demand or consumption to below the final energy figure.

In addition, real estate belonging to customers from business areas considered to be controversial may not be financed. This criterion is also a strict additional condition of Deutsche Hypo's business strategy and is embedded in Deutsche Hypo's sustainability programme.

Rules for utilising renewable energies

No financing of properties for customers from controversial business areas

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Green Bond Minimum Standards

Green Building Commission

An additional condition for the use of Green Buildings is that the financed real estate is only leased to uncontroversial main tenants. The property will be excluded from the portfolio of suitable Green Buildings should it become known that a main tenant operates in a controversial business.

Monitoring

The suitability of green assets in the portfolio for Green Bond issues is reviewed by Treasury employees on a regular basis and flagged in Deutsche Hypo's portfolio system.

Unsuitable financings and the underlying assets are replaced by new financings or assets. A financing and its underlying assets are considered unsuitable if it becomes known that a main tenant is involved in an area of business that is considered to be controversial or if the energy pass or sustainability certificate expires.

Deutsche Hypo has set itself the requirement that the real estate suitable for a Green Bond issue must at least correspond to the volume of the green bond that has been issued or is to be issued. If it is not possible to directly use the proceeds from Green Bonds to finance energy-efficient real estate in accordance with this framework, they must be immediately invested with a credit institution with a sufficiently positive rating granted by a recognised sustainability rating agency (here: oekom research AG with at least Prime Status) on an interim basis.

Reporting

Each year, Deutsche Hypo publishes a Green Bond report on its website. The report Scope of Green Bond reporting contains the following information:

- Current volume of the Green Building inventory
- CO₂ reduction of all Green Buildings compared to the relevant average
- Characterisation of Green Buildings to property certifications, location, sustainability aspects, etc.

Rental exclusively to uncontroversial main tenants

Treasury regularly reviews portfolio

Ineligible financing facilities are replaced by new financing facilities or assets

Real estate portfolio eligible for Green Bonds must at least correspond to the volume of Green Bonds issued/to be issued

SUSTAINABILITY IN THE OPERATING BUSINESS

Sustainability affects both the asset and liability businesses

Through a systematic approach, Deutsche Hypo ensures that material sustainability Systematic approach aspects are integrated into both the asset and liability businesses of the bank: Transactions that identifiably infringe fundamental sustainable development principles such as in connection with controversial business fields like weapons or pornography are identified and declined on the basis of exclusion criteria. A framework of sustainability guidelines establishes the connection between individual transactions and the specific sustainability standards that Deutsche Hypo regards as relevant, such as the German Sustainability Code for the UN Global Compact. This approach integrates sustainability in a targeted and individual manner. Products and services with social use When calculating the monetary value of products and services with social use or Taking direct and indirect income benefit, Deutsche Hypo takes into consideration the direct and indirect contributions from the core business into account that the core business generates for clients and society. In the social sustainability area, Deutsche Hypo has reported its lending business **Identified sectors** with clients whose business activities are of particular public interest. The following sectors are identified at Deutsche Hypo in accordance with the Bundesbank's sector key: Land and residential real estate Education and training Healthcare Residential homes (e.g. care homes) • Manufacturing of food and animal feed Deutsche Hypo has committed financing volume in these sectors of around Financing volume at the end of 2016: EUR 12.1 billion EUR 12.1 billion as of the 31 December 2016 reporting date. Products and services with ecological use By way of analogy with social use or benefit, Deutsche Hypo has identified lending

- Waste disposal
- (Mechanical and plant) engineering

business with ecological use or benefit for the following sectors:

Deutsche Hypo has committed financing volume in these sectors of around EUR 105 billion as of the 31 December 2016 reporting date.

Identified sectors

Financing volume at the end of 2016: EUR 105 billion

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ESG guidelines

Along with existing guidelines at Deutsche Hypo to implement and comply with the guidelines of "classic" banking supervision as well as other civil law and tax law regulations at German, European and international level, further guidelines exist in the bank to direct and regulate business activity in relation to the growing consideration given to economic, ecological and social aspects.

These so-called ESG guidelines supplement existing strategy and governance guidelines and principles, enabling the portfolio to be managed on a comprehensive basis. The Managing Board approves all ESG guidelines, making them binding for all staff as a consequence. An external audit is not conducted.

The purposes served by the ESG guidelines include avoiding ESG risks. Deutsche Hypo defines ESG risks as risks that can arise due to corporate management, or social or ecological aspects as part of a business transaction or business relationship. ESG risks count as operational risks in this context.

As part of its business activities, Deutsche Hypo examines certain engagements according to ESG perspectives, to identify business and reputation risks in the interests of clients and the bank at an early juncture. Like other risks, potential ESG risks are evaluated as part of the credit process, and are included in the overall vote for the business as soon as they arise or are identifiable.

The starting point to assess risk potential is formed by the specialist expertise and experience of staff, the ESG guidelines, and the regulations underlying the guidelines. Where required, unclear business transactions or potentially unclear effects of business transactions are passed to the Reputation Committee for further appraisal.

Deutsche Hypo has established a Reputation Committee to optimise the management of reputation risks in the real estate financing area. This committee is convened if the bank becomes aware of information of potential relevance to its reputation that can lead, or has led, to significant business losses and/or damage to the bank's image. Along with the compliance officer, the Reputation Committee consists of departmental heads from personnel and law, credit risk management, communications and the staff of the Managing Board, as well as the divisional head of the market area that is affected.

Guidelines for real estate financing

As a bank specialising in covered bonds and real estate, Deutsche Hypo bears a particular responsibility to support its customers in constructing, acquiring and operating real estate whose value is also secured through taking ecological and social criteria into consideration.

To appropriately fulfil this mandate and reduce borrowing costs, a set of guidelines specifies the inclusion of sustainability aspects in the core business, commercial real estate financing. Sustainability aspects are integrated into the risk assessment of the property. If sustainable planning exists for a property, the risk of vacancy is lower, for example. For the sustainable core business, the bank evaluates investments according to financial, building law and ecological aspects as part of risk

Financing volume at the end of 2016: EUR 105 billion

Supplementing existing guidelines and principles in relation to strategy and governance

Avoiding ESG risks

Identifying business and reputation risks

Avoiding ESG risks

Reputation Committee in the real estate financing area

Property values to be secured through taking ecological and social criteria into account

Guidelines: taking sustainability aspects into consideration in the core business

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management. The best possible financing solution is then developed together with the customer.

Financing energy-efficient buildings as part of the commercial real estate financing business area represents the core aspect here. By financing such Green Buildings, the bank aims to actively contribute to the reduction of greenhouse gases.

Deutsche Hypo founded the "Green Buildings" working group to quantify sustainable aspects, among other purposes. Development projects earmarked for certification comprised 50 percent of all commitments as of 31 December 2016 (previous year: 36 percent). This percentage rate is subject to natural fluctuations, as the number of development projects and related property types can vary significantly from year to year.

Financing guidelines for controversial business areas

The guidelines on the controversial business areas regulate or prohibit the arrangement of business relationships with arms industry companies and companies that produce pornography.

Financing facilities relating to the arms industry are subject to stringent regulations. **Arms industry** The weapons and armaments industry is not a business area forming part of Deutsche Hypo's core business. Furthermore, Deutsche Hypo only finances customers relating to weapons and armaments that serve the defence and security of the liberal and democratic constitutional order of the Federal Republic of Germany, and which are earmarked for the fulfilment of international agreements.

Business relationships with companies that produce and trade in pornography as well as with companies that are related to this sector are prohibited.

The ESG guidelines for sectors and banking areas are always developed together with staff from the specialist areas. Awareness about the ESG guidelines is raised in the relevant areas. Processes are further evolved and adapted to current developments as part of an annual quality test.

Sustainable refinancing

Funding is also structured on an ecologically sustainable basis. Through issuing Green Bonds, Deutsche Hypo also aims to meet the objectively measurable growth in investor demand for ecologically sustainable investments.

With the issuing of Green Bonds, the bank, as a financial intermediary, endeavours to meet our society's target of reducing global warming.

Financing Green Buildings

Green Buildings working group

Controversial business areas

Pornography

Continuous further development of guidelines

Ecologically sustainable funding

Contribution to climate targets

ISSUER PROFILE

Issuer at a glance

Deutsche Hypo was founded in 1872 by Berlin-based merchants and bankers as the Deutsche Hypothekenbank (Actien-Gesellschaft).

The bank's head office with its approximately 400 staff is located in Hannover. Deutsche Hypo is also present in Berlin, Hamburg, Düsseldorf, Frankfurt and Munich, as well as in Amsterdam, London, Paris, Madrid and Warsaw. It sees itself as a German real estate bank with a European orientation, supporting its clients in the strategic target markets of Germany, the United Kingdom, France, Benelux, Spain and Poland.

Deutsche Hypo's main business activities can be divided into two business areas.

Commercial real estate financing forms the bank's core business area with a more than 80% share of the bank's total interest and commission results. This area includes all real estate financing for clients that generate most of their cash flow from real estate or regularly realise significant real estate investments.

The second business area, the capital market business, includes securities, deposits and derivatives business with banks, as well as refinancing. This area also (still) includes the government financing business, whose portfolio has been undergoing continuous reduction for some years.

As a company owned by Norddeutsche Landesbank Girozentrale, Deutsche Hypo forms the expertise centre for commercial real estate financing within the Group. This also includes its role as a significant issuer of mortgage bonds within the NORD/LB Group. In addition, the bank refinances itself through unsecured debt securities. The aim at all times is to possess long-term stable refinancing capability on competitive terms.

Deutsche Hypo comprises a strategic interest of NORD/LB as a wholly owned subsidiary, and is included in its consolidated financial statements.

STRUCTURE OF THE NORD/LB GROUP



Source: NORD/LB (2017)

German real estate bank with a European orientation

Two business areas

Core business area: Commercial real estate financing

Capital market business

Expertise centre for commercial real estate financing in the NORD/LB Group

Strategic interest of NORD/LB

>> Strategy

Deutsche Hypo performs its tasks based on its corporate principles. The bank has also introduced management principles to supplement these corporate principles.

The bank's main corporate objectives include:

- the sustainable securing and enhancing of corporate value, profitability and profit transfer, including through an appropriate return on equity by the bank and the Group,
- strengthening the business model through diversifying the earnings base and expanding competences, including through boosting RWA-dependent income and limiting risk through a granular portfolio,
- optimally serving customer requirements,
- securing refinancing and liquidity at all times,
- promoting employee performance and loyalty.

Deutsche Hypo regards sustainability as an important element of its business model. Its aim is to structure the bank to be sustainably profitable, thereby securing profitability and jobs for coming generations.

Deutsche Hypo has identified a total of five sustainability action areas, thereby assigning them strategic focus:

- Governance
- Customers and investors
- Employees
- Society
- Environment.

Deutsche Hypo's sustainability strategy addresses central aspects of global change for the bank as well as for its customers and investors, and shows how the resultant opportunities can be efficiently realised and risks can be managed responsibly.

Here, Deutsche Hypo pays attention with differing degrees of urgency and intensity to long-term trends relating to topics such as climate change, demographic shift, the urbanisation process or raw material shortages, to adjust tried and tested business models at an early juncture and regularly to align with these trends' complex effects, and to create corresponding solutions.

In focus: global change

Identifying trends and effects, and creating solutions

Corporate principles supplemented

Significant corporate objectives

by management principles

Sustainability as an important element of the business model

Five sustainability action areas

>> Sustainable Governance

The Deutsche Hypo Managing Board has declared the professionalisation of sustainability management as a central objective within the bank.

Responsibility for the implementation of this objective lies with the sustainability management function, which is situated within the communications department and forms part of the Managing Board's staff. This comprises one the main areas of activities of this area. Responsibilities of the sustainability management function include implementing sustainability standards, coordinating sustainability measures and further developing the sustainability strategy.

The sustainability management function is supported by a sustainability group consisting of members of departments of the bank that have greater involvement with sustainability. Its members derive from the following departments: communications and the staff of the Managing Board, domestic lending, credit department and real estate valuation, credit risk management, organisation and IT, personnel and law, treasury, corporate development and corporate steering.

The sustainability group supports the sustainability management function in identifying sustainability topics, develops targets measures, and proposes them to the Managing Board for implementation. The members also support the implementation of the measures in their respective areas. Since it was founded, the sustainability group has met at least once every quarter, discussing and developing sustainability topics at overall bank level.

The individual areas and the sustainability management function also hold regular bilateral discussions at which they jointly develop new topics. As occasion requires, these are then proposed to the Managing Board for implementation.

ORGANISATIONAL STRUCTURE OF SUSTAINABILITY MANAGEMENT



Source: Deutsche Hypo (2017)

Deutsche Hypo conducts dialogue with relevant stakeholder groups (including sustainability rating agencies) to generate new ideas for the orientation of its sustainability management function. This ensures that corporate activity is structured in accordance with the interest groups' requirements, thereby securing long-term

Anchoring sustainability at the level of the Managing Board

Sustainability management

Sustainability group ...

... supports sustainability management in identifying sustainability topics

Bilateral discussions with individual areas of the bank

Regular stakeholder dialogue

success and competitiveness. The results from these stakeholder dialogues are integrated into the sustainability programs, giving Deutsche Hypo impulses for the orientation of its sustainable activities.

Sustainability-related principles, guidelines and initiatives **>>**

For Deutsche Hypo as a financial services company, taking into consideration the	UN Global Compact
ten internationally recognised principles of the UN Global Compact deriving from the	
aspects of human rights, labour, environment and anti-corruption, forms an important	
element of responsibility for its clients and employees, and as a "corporate citizen"	
for society.	

As a subsidiary of NORD/LB - a signatory to the UNEP Statement Commitment -Deutsche Hypo is also oriented to the Finance Initiative, and is consequently committed to sustainable development, forward-looking environmental management, and open communications in relation to the promotion of environmental aspects.

With its membership in the German Property Federation (ZIA), Deutsche Hypo is voluntarily committed as part of its corporate real estate activities to the ZIA Sustainability Guidelines: "Sustainability in the Real Estate Sector - Code of Conduct, Reports and Compliance".

Deutsche Hypo prepares its annually published sustainability report in compliance with the guidelines of the Global Reporting Initiative (GRI).

Deutsche Hypo is committed to the German Sustainability Code, a transparency standard for corporate sustainability management.

Through signing the Diversity Charter, Deutsche Hypo wishes to advance the recognition, appreciation and inclusion of diversity in corporate culture in Germany irrespective of gender, nationality, ethnic origin, religion or worldview, handicap, age, sexual orientation and identity.

Operating trends

In a market environment that continued to be characterised by high demand for real estate as well as a highly competitive commercial real estate lending market, Deutsche Hypo grew its commitment volumes both in Germany and abroad.

In the first half of 2017, the bank grew its new business volume to EUR 2.116 billion, representing 17.4% year-on-year growth. With a 62.1% share (previous year: 60.6%), the geographic focus of new business remained in Germany (and especially on office and retail properties in Germany).

Overall, the real estate financing portfolio reported 3% growth compared with the end of 2016.

UNEP Statement of Commitment

ZIA Sustainability Guidelines

Global Reporting Initiative

German Sustainability Code

Diversity Charter

High competitive intensity

New business volume growth with geographic focus on Germany

Slight growth in real estate financing portfolio

Total assets were down by -3% compared with the end of the previous year to EUR 24.4 billion (Dec 31, 2016: EUR 25.2 billion). The background to this is the continuation of the strategic portfolio downsizing in the capital market business, reflected in reductions in local government loans as well as third-party securities. This trend arises mainly from scheduled maturities. Individual disposals were also realised as part of active portfolio management.

Overall, Deutsche Hypo increased its result from normal operations by 4.5% to EUR 35.2 million in the first half of 2017 (previous year: EUR 33.7 million). The earnings growth reflected a reduction in net interest income of -3.2% to EUR 98.6 million, a positive earnings contribution from the capital market business of EUR 2.9 million (previous year: EUR -10.9 million), an improvement in the risk result of EUR -19.5 million (previous year: EUR -25.5 million) and an 8% rise in administrative expenses to EUR 46 million.

Equity as reported on the balance sheet reduced year-on-year from EUR 913 million to EUR 838 million due to the repayment as of the balance sheet date of the silent partners' capital that was already discontinued in the previous financial year. Due to the control and profit transfer agreement, Deutsche Hypo transfers all its earnings to NORD/LB.

As far as regulatory equity backing is concerned, Deutsche Hypo utilises the waiver regulation whereby the obligations to file an individual bank report as well as to comply with requirements in terms of equity and equity backing do not apply. The bank nevertheless calculates an equity ratio that takes into consideration all existing capital components in line with regulatory provisions. A total of EUR 1.1546 billion (previous year: EUR 1.1824 billion) was eligible for regulatory equity backing in accordance with the regulatory provisions. The slight reduction in equity was offset by a 4.9% decrease in risk-weighted assets. Consequently, the equity ratio reported a slight increase to 19.4% as of 30 June 2017 (previous year: 18.9%).

Reduction in total assets due to continued strategic portfolio downsizing in the capital market business

Growth in result from normal operations

Reduction in reported equity

Improvement in equity ratio

EESG ANALYSIS METHODOLOGY OF DZ BANK SUSTAINABLE **INVESTMENT RESEARCH**

Concept of DZ BANK Sustainable Investment Research

The aim of the DZ BANK Sustainable Investment Research was to develop an analysis methodology for issuers which in terms of a long-term sustainability assessment (as opposed to traditional short-term credit assessment and fundamental analysis) corrects the shortcomings in both traditional ratings and available sustainability ratings on the market. The rating graduations do not represent a rating category within the meaning of the EU Rating Regulation.

The result is an integrated, four-dimensional EESG analysis model.

DZ BANK Sustainable Investment Research takes the view that these four sustainability Four interacting sustainability dimensions should not be seen in isolation, but rather in a joint context, as the subdisciplines influence one another.

DIMENSIONS OF DZ BANK SUSTAINABLE INVESTMENT RESEARCH



Source: DZ BANK Sustainable Investment Research (2016)

On the one hand, in contrast to traditional financial ratings, the integrated sustainability concept of DZ BANK Sustainable Investment Research includes Environment (E), Social (S) and Governance (G) aspects which are important for issuers' long-term and sustainable development and may have an impact on their stability and credit rating.

On the other hand, as opposed to the available sustainability ratings on the market, the concept goes beyond a purely ESG approach, i.e. an exclusive analysis of ecological, social and governance factors, as sustainability is an investment matter and current and future economic success is also a core consideration for every issuer. Moreover, every investor's goal is to achieve a return. This also applies to

Traditional sustainability dimensions E, S and G ...

... are supplemented by an economic sustainability dimension (E)

Correct the shortcomings in traditional ratings and available ESG ratings on the market

EESG analysis model

dimensions

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investors who are purely interested in sustainability. Therefore, the integration of the economic perspective (E) in the sustainability analysis is crucial.

In comparison to traditional financial analysis, the long-term aspect is even more at the forefront of sustainability analysis, as economic sustainability postulates that current society, and therefore also issuers as part of this society, should not live beyond their means so as to rule out losses for future generations.

Furthermore, the sustainability concept of DZ BANK Sustainable Investment Research takes into consideration the fact that sustainability is not a rigid construct, but rather a complex, dynamic process. The subjects of the analysis develop dynamically over time, in that an issuer who is currently classified as sustainable may already no longer be classified as sustainable in the next evaluation, or vice versa.

The analysis methodology of DZ BANK Sustainable Investment Research is based on Materiality the principle of materiality. It is not focused solely on internal guidelines, rules, processes or strategies, but also includes ecological, social and long-term economic effects, i.e. the impact, of products and services when evaluating an issuer.

Economic sustainability analysis: long-term orientation

Sustainability as a complex, dynamic investment process

Impact of products and services

Methodology of DZ BANK's sustainability rating

The sustainability rating of DZ BANK Sustainable Investment Research is the result of a Integrated sustainability analysis ... multi-stage, integrated analysis process. In addition to the specialist knowledge of sustainability analysts, equity, fixed income and economic research expertise is also utilised.

Identification of the sustainably investable universe takes place in three steps.

... in three steps



Source: DZ BANK Sustainable Investment Research (2016)

Firstly, the three traditional sustainability dimensions Environment (E), Social (S) and Governance (G) are analysed and combined to form an ESG rating.

The next step is to integrate the economic sustainability dimension (E). Using economic sustainability indicators, an economic factor is calculated in the form of a premium or a discount which forms the basis for calculating our integrated sustainability rating.

In a final analysis step the analysed issuers are classified in the categories "sustainable" or "non-sustainable". Dynamic sustainability thresholds (sector and cross-sector thresholds), exclusion criteria (hard and soft) and current EESG controversies are also taken into account.

Issuers classified as sustainable are labelled with the "DZ BANK Seal of Quality for Sustainability" in research publications.

A detailed description of our EESG analysis and our sustainability rating can be found in our methodology report from 1 September 2016.

Step 1: traditional ESG analysis

Step 2: Integration of economic sustainability dimension

Step 3: Classification with the aid of sustainability thresholds, exclusions and controversies

DZ BANK Seal of Quality for Sustainability

Detailed description of analysis and rating methodology

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OUR SUSTAINABILITY RATINGS

SUSTAINABILITY RATING FOR CORPORATES



Source: DZ BANK Sustainable Investment Research (2016)

SUSTAINABILITY RATING FOR COUNTRIES



Source: DZ BANK Sustainable Investment Research (2015)

SUSTAINABILITY RATING FOR SSAS



Source: DZ BANK Sustainable Investment Research (2016)

I. IMPRINT

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Chairman of the Supervisory Board: Helmut Gottschalk

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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Share indices (technical daily):	publicationday
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Allocation of market segments	one month
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