



Providing for the Future

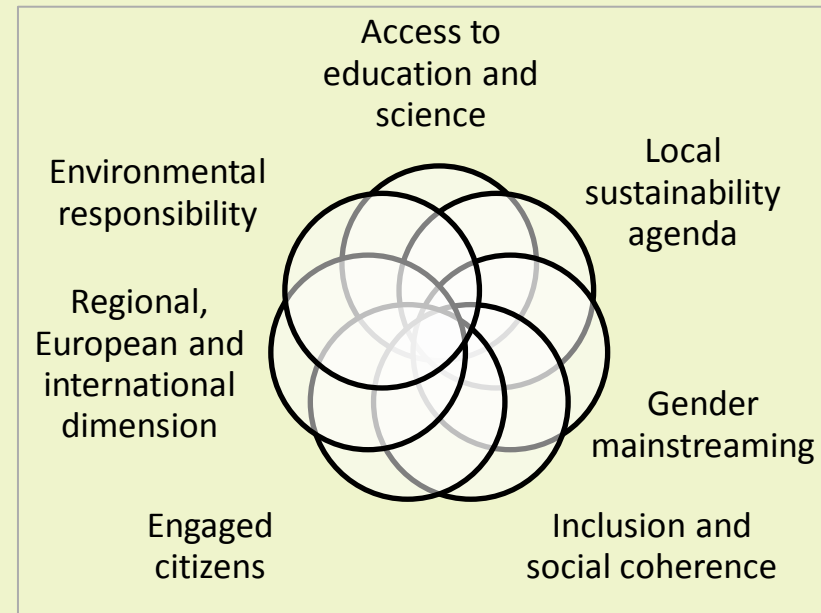


Sustainability Bond #3 State of North Rhine-Westphalia



NRW Sustainability Strategy

- Sustainable Development is a central guiding principle for the State of NRW.
- Sustainable development means integrated environmental, social and economic development. The concept is closely related to the principles of prevention and inclusion.
- The [NRW Sustainability Strategy](#) has been approved by the State Government in 2016.
- The Strategy is meant to implement the global Sustainable Development Goals (SDGs) on the State level. It also serves as the political reference for the bond.





Sustainable Development

Fields of Action and Focal Areas

- Climate protection and energy transition
- Sustainable business management
- Protection of natural resources: biodiversity, woodland, water, land/soil, air and environment & health
- Demographic change
- Social cohesion and participation
- Decent work – fair labor
- Integration
- Sustainable fiscal policy
- Sustainable development of urban areas and neighbourhoods
- Sustainable mobility
- Sustainable consumption / Sustainable lifestyles
- Land cultivation
- Health
- One-world policy and European and international dimension
- Gender equality
- Universal accessibility and inclusion
- Sustainability in the municipalities (local agenda)
- Civic commitment/participation
- Education and science



Sustainability Quality of the Bond

Framework Concept

- Use of proceeds categories offering added social or environmental value
- Sustainability criteria for each project category
- Quantitative indicators for evaluation and reporting

Verification of Compliance

- Second Party Opinion (oekom research, 3 February 2017)
- Evaluation of formal concept, defined processes and disclosures
- Evaluation of sustainability performance of financed projects
- Verification of alignment with Green Bond Principles

oekom r|e|s|e|a|r|c|h



Green Bond Principles

1. Use of Proceeds
2. Process for Project Evaluation and Selection
3. Management of Proceeds
4. Reporting





2030 Agenda for Sustainable Development





Green Bond Principles: Use of Proceeds

A. Education and Sustainability Research



B. Inclusion and Social Coherence



C. Public Transport and Local Mobility



D. Climate Protection and Energy Transition



E. Protection of Natural Resources



F. Sustainable Urban Development



G. Modernisation of Educational
and Public Health Facilities





Green Bond Principles: Project Evaluation and Selection

- Projects were selected in accordance with the categories and criteria set out in the "Sustainability Bond Framework".
- All projects are part of the State's discretionary spending of the fiscal year 2016. Projects prescribed by federal law are excluded.
- Only the State's own expenditures (net of EU grants, federal grants or other revenues earmarked for specific purposes) are taken into account. The State's personnel costs are excluded.
- All projects can be traced to the [NRW 2016 Budget](#) (Haushaltsplan 2016). Detailed information on all the selected projects is available at www.sustainability-bond.nrw.de.



Green Bond Principles: Management of Proceeds

- An amount equivalent to the net issue proceeds of the State Treasury Notes will be used to cover expenditures of the fiscal year 2016 and will thereby substitute money market positions.
- The fiscal year 2016 closes on or about the end of the first quarter 2017.

Budget



2016



Bond



2017



Green Bond Principles: Reporting

- Impact reporting, in particular with regard to avoided greenhouse gas emissions of selected projects, will be made available on a regular basis. The first report, furnished by Wuppertal Institut für Klima, Umwelt, Energie gGmbH, will be published in February 2017.
- Progress in the implementation of the Sustainability strategy will be measured against 70 specific indicators which relate to the 19 fields of action of the sustainability strategy and to the 17 SDGs.
- Development of the sustainability indicators will be reported every two years. The first [Sustainability Indicator Report](#) was published in 2016.
- Additional results are presented on a dedicated website with regular updates, see www.nachhaltigkeitsindikatoren.nrw.de/sdgs.

Sustainability Bond # 3 NRW



Project Category	Budget Result [EUR m]	Eligible for Bond [EUR m]	Use of Proceeds	
			"social"	"green"
A. Education and Sustainability Research	1,393.3	808.0	808.0	
B. Inclusion and Social Coherence	176.7	176.7	176.7	
C. Public Transport and Local Mobility	189.9	188.1	40.0	148.1
D. Climate Protection and Energy Transition	63.7	63.7		63.7
E. Protection of Natural Resources	77.0	70.9		70.9
F. Sustainable Urban Development	72.6	72.6	72.6	
G. Modernisation of educational and public health buildings	451.3	451.3		451.3
Total	2,424.5	1,831.3	1,097.3	734.0

Proportions

100%

60.0%

40.0%

A. Education and Sustainability Research EUR 808.0m



Category A encompasses projects financing the enlargement and improvement of universities and the creation of additional training facilities at public universities, universities of applied science and professional schools. Additionally, consumer protection measures as well as foundational research are funded.



- **Enlargement of Universities** 725.2m
- **Support for Best in Class Universities** 27.4m
- **Innovation and Sustainable Development** 40.8m
- **Consumer Protection** 14.7m

BIS 2020: MEHR MASTERPLÄTZE FÜR NRW

Land und Hochschulen starten Programm zum Ausbau der Anfängerplätze im Masterbereich.



+ 65.000 STUDIENANFÄNGERPLÄTZE
BIS ZU 700 MIO. EURO FÖRDERUNG

2014

2020

Foto: Peter Winandy/RWTH Aachen

[Bund-Länder Covenant for the Expansion of Universities \(Master's degrees\)](#)



B. Inclusion and Social Coherence EUR 176.7m

Activities grouped into Category B support the inclusion of immigrants and people with disabilities. Additionally, projects addressing early childhood development and successful school careers are funded.



- **Inclusion, Integration and Qualification** **71.4m**
- **Language Skills in Early Childhood Education, Support and Advice for Families** **58.2m**
- **School Social Work** **47.1m**



[Report of the State's Initiative for a Life Without Poverty and Exclusion](#)

C. Public Transport and Local Mobility EUR 188.1m



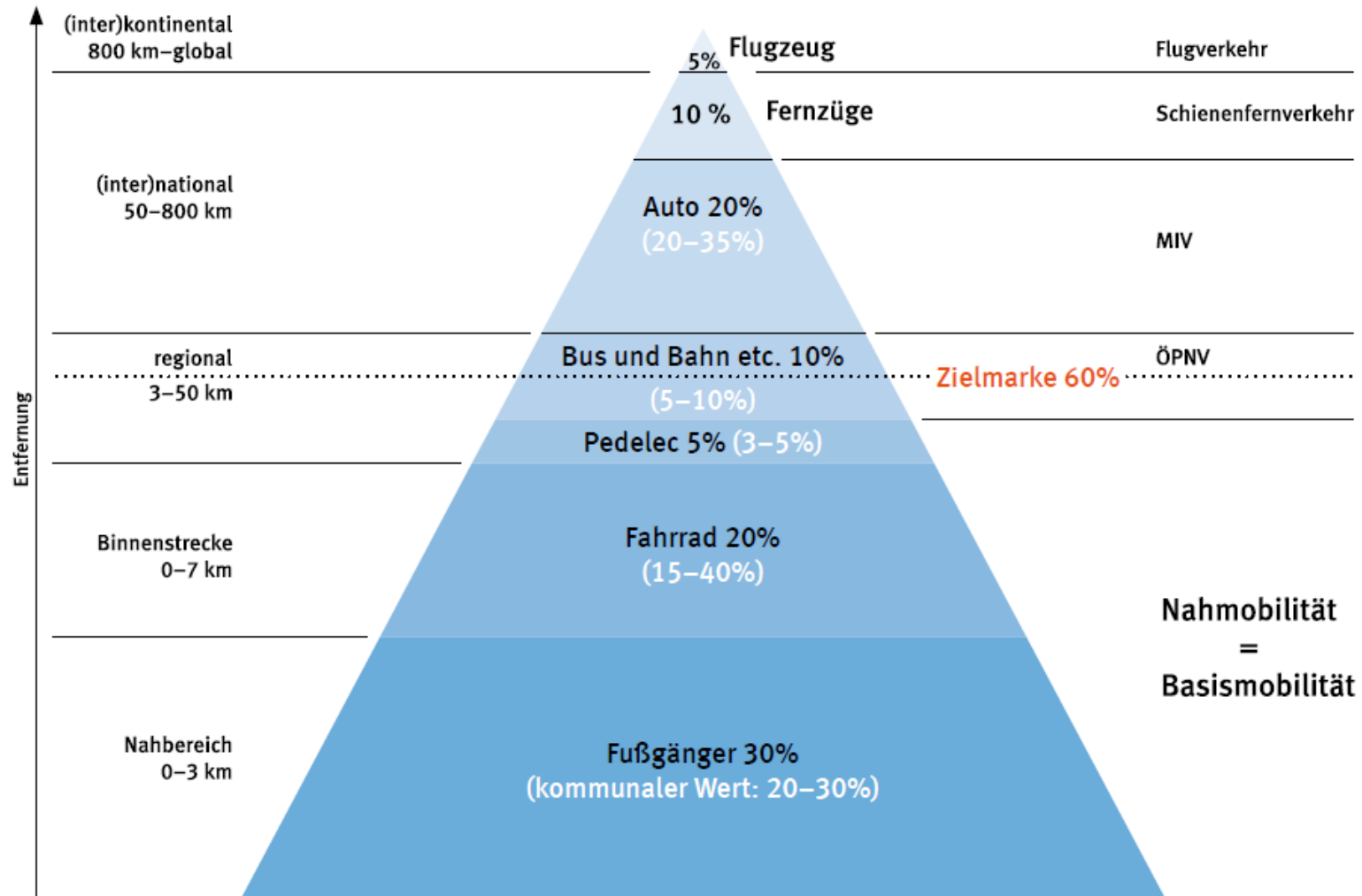
Projects in Category C include subsidised public transportation for pupils, students and low-income citizens. The second part of the category encompasses projects to improve conditions for cyclists and pedestrians, particularly on short-haul routes (local mobility) and to build new cycling paths along state roads and disused railway lines.



- | | |
|---|---------------|
| • Public transportation for low-income citizens | 40.0m |
| • Public transportation for pupils and students | 130.0m |
| • Transportation infrastructure for cyclists and pedestrians | 18.1m |



Optimal Modal Split for Germany



Anmerkung: Fußgänger, Fahrrad und Pedelec bilden zusammen die Basismobilität – mit der Zielmarke 60% (rot). Die in Klammern gesetzten Zahlen (weiß) zeigen die Bandbreite für kommunale Modal-Split-Werte.



D. Climate Protection and Energy Transition EUR 63.7m

Projects in category D include funding for Efficiency Agency North Rhine-Westphalia (EFA NRW). EFA advises municipalities as well as small and medium-sized enterprises on policies and strategies to enhance their resource and energy efficiency. Additional funds are used to support projects of research and development into climate protection and energy transition.



- **Climate Protection and Renewable Energies** **58.6m**
- **Resource Efficiency** **5.1m**



Klimaschutzplan Nordrhein-Westfalen

Klimaschutz und Klimafolgenanpassung

[Plan of Campaign](#)



E. Protection of Natural Resources EUR 70.9m

Projects in category E fund either measures to avoid loss of biodiversity and to increase population of endangered species or provide financial support for flood protection projects and the restoration of the original state of watercourses.



- **Protection of Nature, Landscape and Biodiversity** **29.7m**
- **Flood Protection and River Restoration** **23.3m**
- **Responsible Agriculture and Rural Development** **17.9m**



Für die Vielfalt in der Natur
Die Biodiversitätsstrategie des Landes
Nordrhein-Westfalen

[Biodiversity Strategy NRW](#)



F. Sustainable Urban Development EUR 72.6m

Projects in category F address several challenges faced by local communities such as the effects of a shrinking population and a stagnating economic development. Funds are directed at issues such as urban renewal, labour market development, economic structure and growth, housing, social and cultural infrastructure, integration and inclusion, schools, promotion of health, prevention of crime and public relations.



- **Urban Reconstruction in the West** **33.1m**
- **Social City** **31.3m**
- **Geriatric Care and Demographic Change** **8.2m**



10 Jahre Stadtumbau in Nordrhein-Westfalen Bilanz und Zukunft eines Programms

[Report Urban Reconstruction](#)



G. Modernisation of Educational and Public Health Facilities EUR 451.3m

Category G encompasses projects to modernise educational and public health facilities. A focus is on the modernisation and extension of university medical clinics. Additional funds are targeted at the modernisation of general university buildings.



- **Modernisation of University Buildings** **93.5m**
- **Modernisation of University Medical Clinics** **357.8m**



Masterplan University Medical Clinic Münster 2025



Evaluation by oekom research

Second Party Opinion, 3 February 2017

oekom's overall evaluation of the Sustainability Bond is positive:

- The sustainability bond's formal concept, defined processes and (announced) disclosures are largely aligned with the Green Bond Principles.
- The overall sustainability quality of the bond and the sustainability performance of each of the funded projects in terms of sustainability benefits and risk avoidance and minimisation is good.
- The country, which the issuer forms part of, shows a good sustainability performance.

Aspects for which more specific selection or performance criteria would be recommended:

- Quantitative targets or requirements concerning energy efficiency improvements for projects in categories F and G
- Comprehensive environmental standards for projects in categories C, F and G

Capital Markets Presentation NRW



February 2017

Constitutional Principles



- **Federal System**

Germany is a Federal Republic, with two concurrent levels of government: the States ("Länder") and the Federation ("Bund").

- **Responsibility of the Länder**

The Länder have their own legislative, judicative and executive powers. They are independent with regard to their budgets. Through the "Bundesrat" (Upper House of Parliament), the Länder play an active role in the federal legislative process.

- **Zero Borrowing Rule ("Debt Brake")**

The Länder have to reduce their structural deficit to zero by 2020, the Bund to not more than 0.35% of GDP since 2016.

- **Federal Equalisation System**

The Federal Equalisation System is an important instrument to assign tax revenues between Bund and Länder. It ensures sufficient financial strength of all Länder and enables equal standards of living for all citizens in Germany. The federal and state governments have agreed in principal on a reform of the current system. All States stand to benefit from the new rules, which shall take effect in 2020 (legislation pending).

- **Allegiance to the Federation ("Bundestreue")**

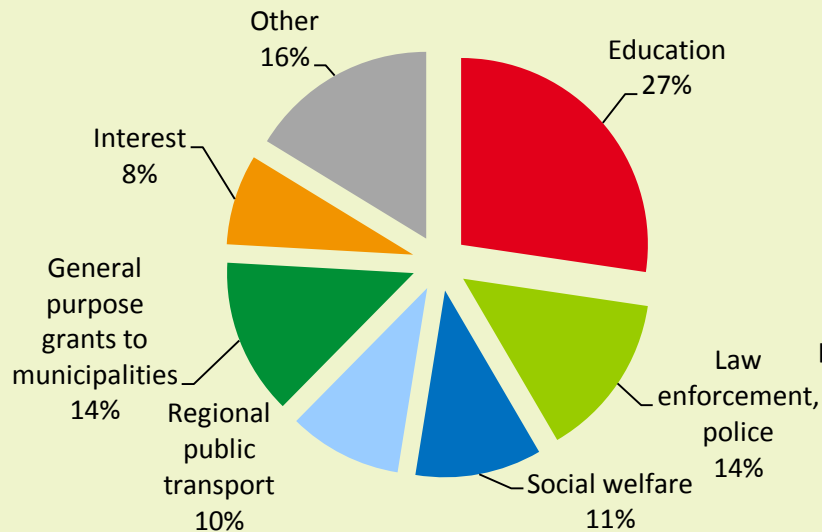
The federal and state governments are under an obligation to respect their mutual interests, to co-operate in the performance of the tasks assigned to them by the Constitution and to render mutual assistance.



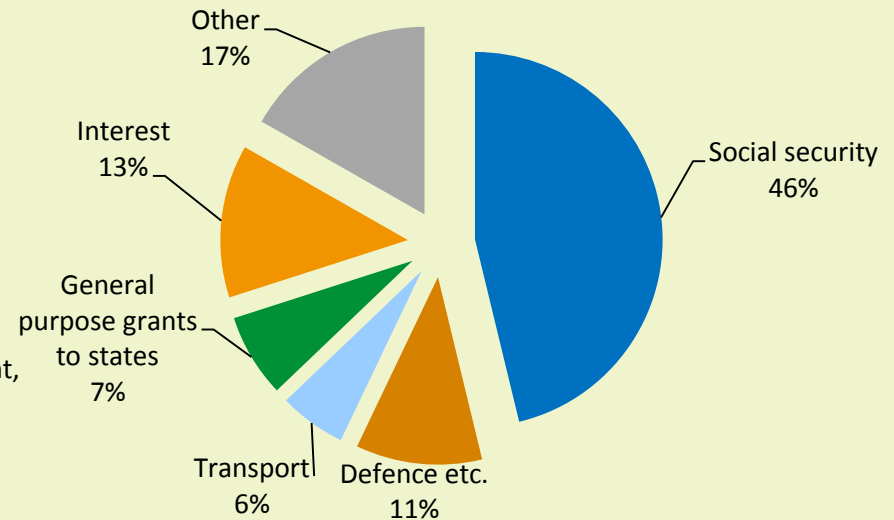


Budgets of Bund and Länder Size and Structure

Länder (all), EUR 295 bn



Bund, EUR 325 bn



- State budgets are characterized by their responsibilities in the areas of education, law enforcement, tax administration and infrastructure.
- The federal budget is dominated by expenditures for social security – health, unemployment and retirement insurance.



NRW

Largest German State in Terms of Population and GDP

NRW 2015

Area	34,110 km ²
Population	17.6 mn
Population density	517/km ²
GDP	EUR 645.6 bn
GDP per capita	EUR 36,509
Real growth	0 %
Working Population	9.2 mn

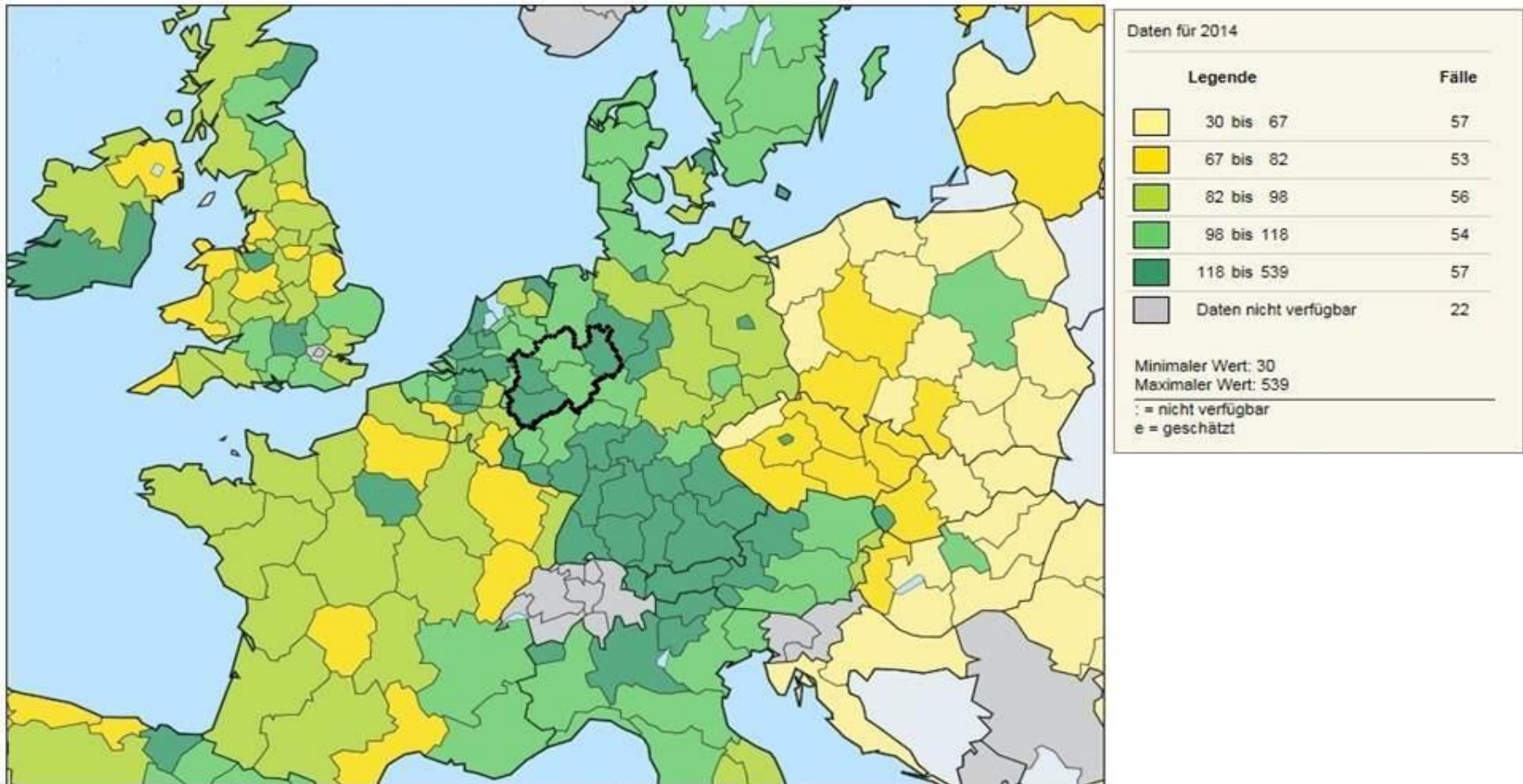




Europe

Regional GDP 2014

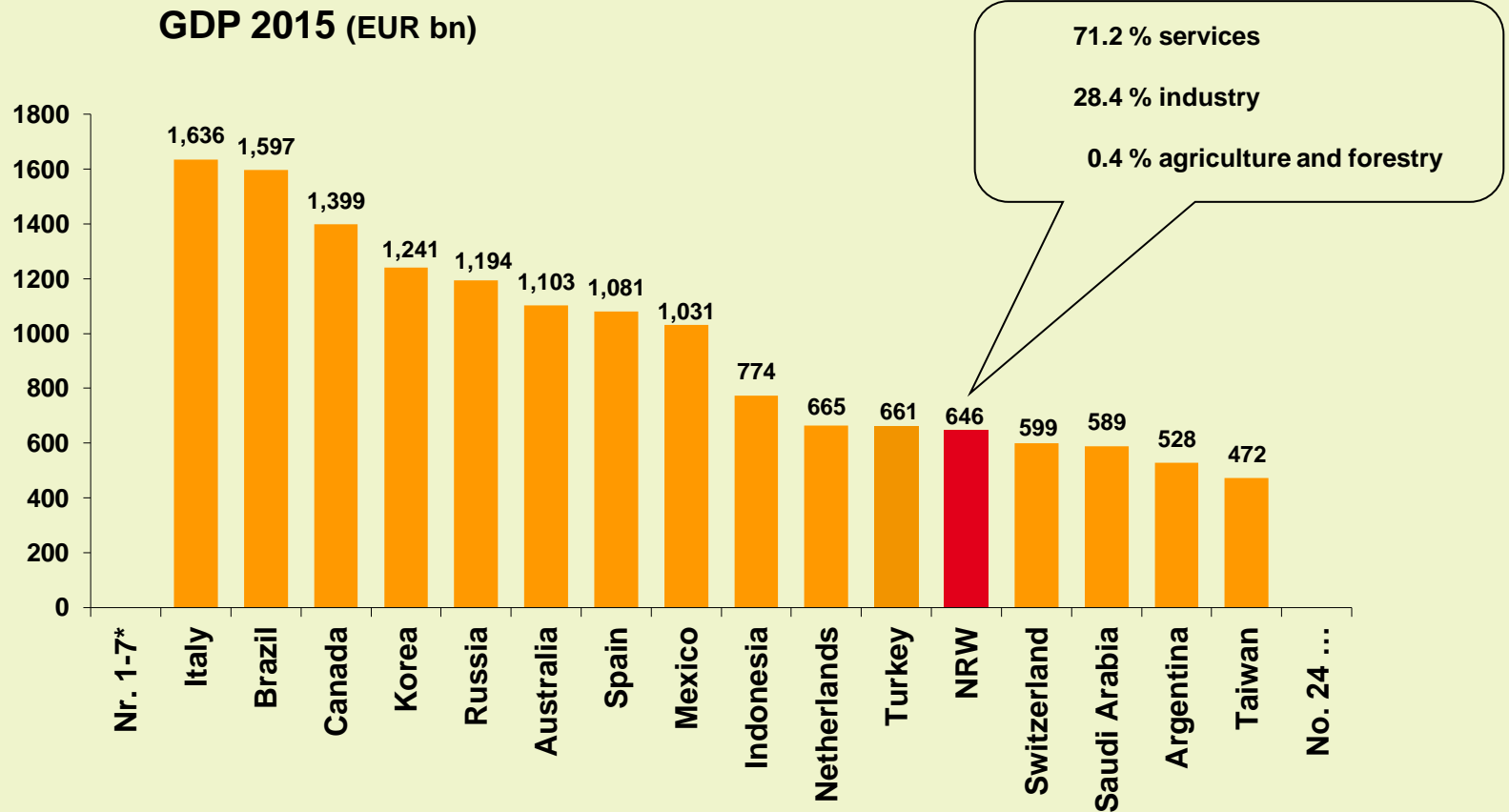
By NUTS 2 regions (PPS per inhabitant in % of the EU28 average)



Quelle: Eurostat, Hyperlink zur Karte: <http://epp.eurostat.ec.europa.eu/tgm/mapToolClosed.do?tab=map&init=1&plugin=1&language=de&pcode=00006&toolbox=types>



One of the Top 20 Economies worldwide



*USA, China, Japan, Germany, United Kingdom, France, India

Source: IMF April 2016, Statistical Office NRW



Prime Location for Business

- Successful structural transformation to technology and services
- More than 750,000 small and medium-sized companies
- Centre for media and health care



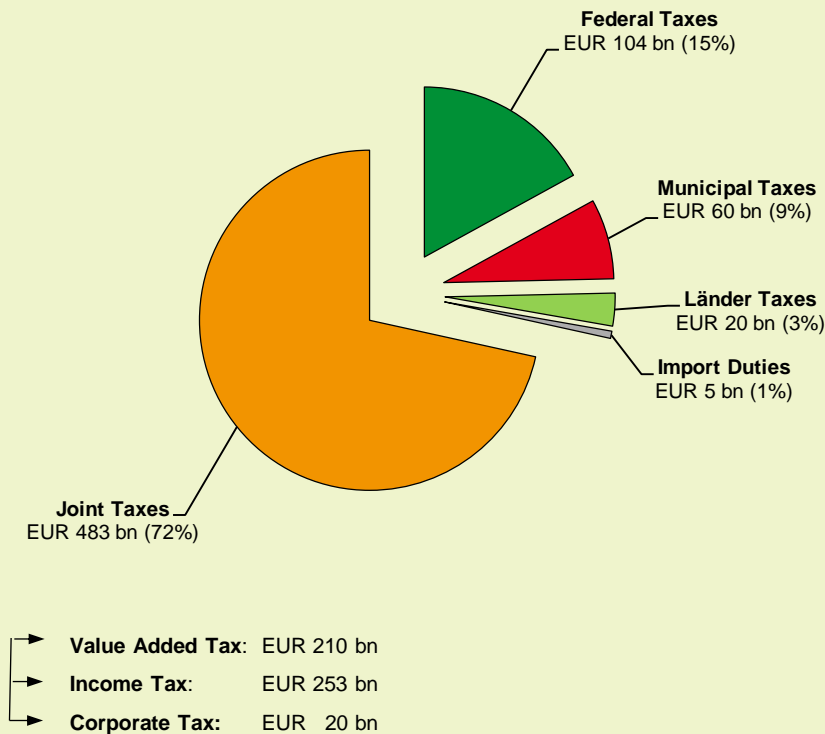
18 of the largest 50 German companies are headquartered in NRW



Tax Base

Composition of Tax Revenues 2015

- Total EUR 672 bn -



Source: Destatis

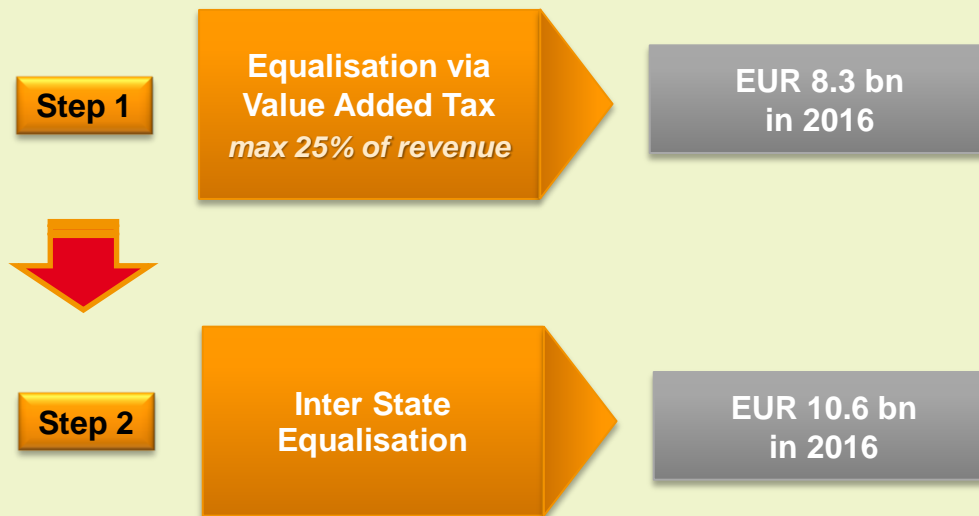
- “Revenue from income taxes, corporation taxes, and turnover taxes shall accrue jointly to the Federation and the Länder (joint taxes)...” (Art. 106(3) of the Constitution)
- Joint taxes are distributed between the federal, Länder and municipal levels according to different allocation formulas (e.g. income tax: 42.5% Federation, Länder 42.5%, municipalities 15%)
- The federal, Länder and municipal levels also have exclusive revenue claims in certain areas of taxation (e.g. Federation ⇒ energy tax, Länder ⇒ inheritance tax, municipalities ⇒ trade tax)
- Collection and distribution of joint taxes (more than 70% of the overall tax revenues) are executed almost entirely by tax offices of the 16 Länder



Federal Equalisation System

Constitutional Law requires uniformity of living standards for all citizens in Germany. The federal equalisation scheme provides the necessary adjustments with regard to the financial capability of the states.

Horizontal Equalisation (“Länderfinanzausgleich”)



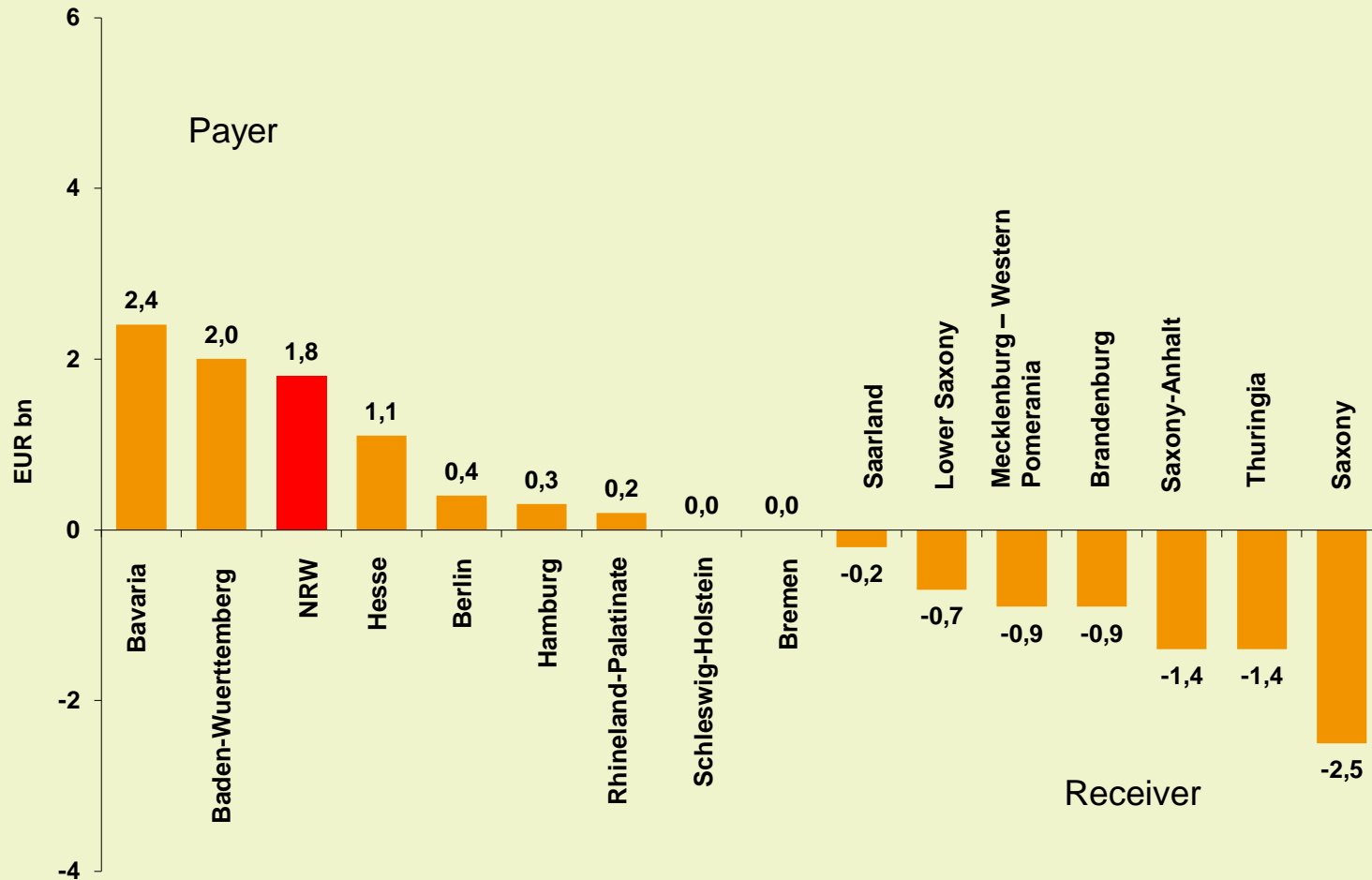
- In the tax collection process, tax revenue accrues to the individual Länder to the extent that taxes are collected within their respective territories (local revenue).
- The states' share of VAT revenue is distributed among the Länder on a per capita basis.
- After tax collection and allotment, relative financial capacity of the states ranges from 54.5% to 150.4% of Länder average (in 2016).
- Before step 2 of the equalisation scheme, relative financial capacity ranges from 69.6% to 118.4% of Länder average (in 2016).
- After step 2 of the equalisation scheme, relative financial capacity ranges from 90.8% to 106.7 % of Länder average (in 2016).

Source: Ministry of Finance NRW



Federal Equalisation System

2016 - Equalisation via Value Added Tax (1st Step)

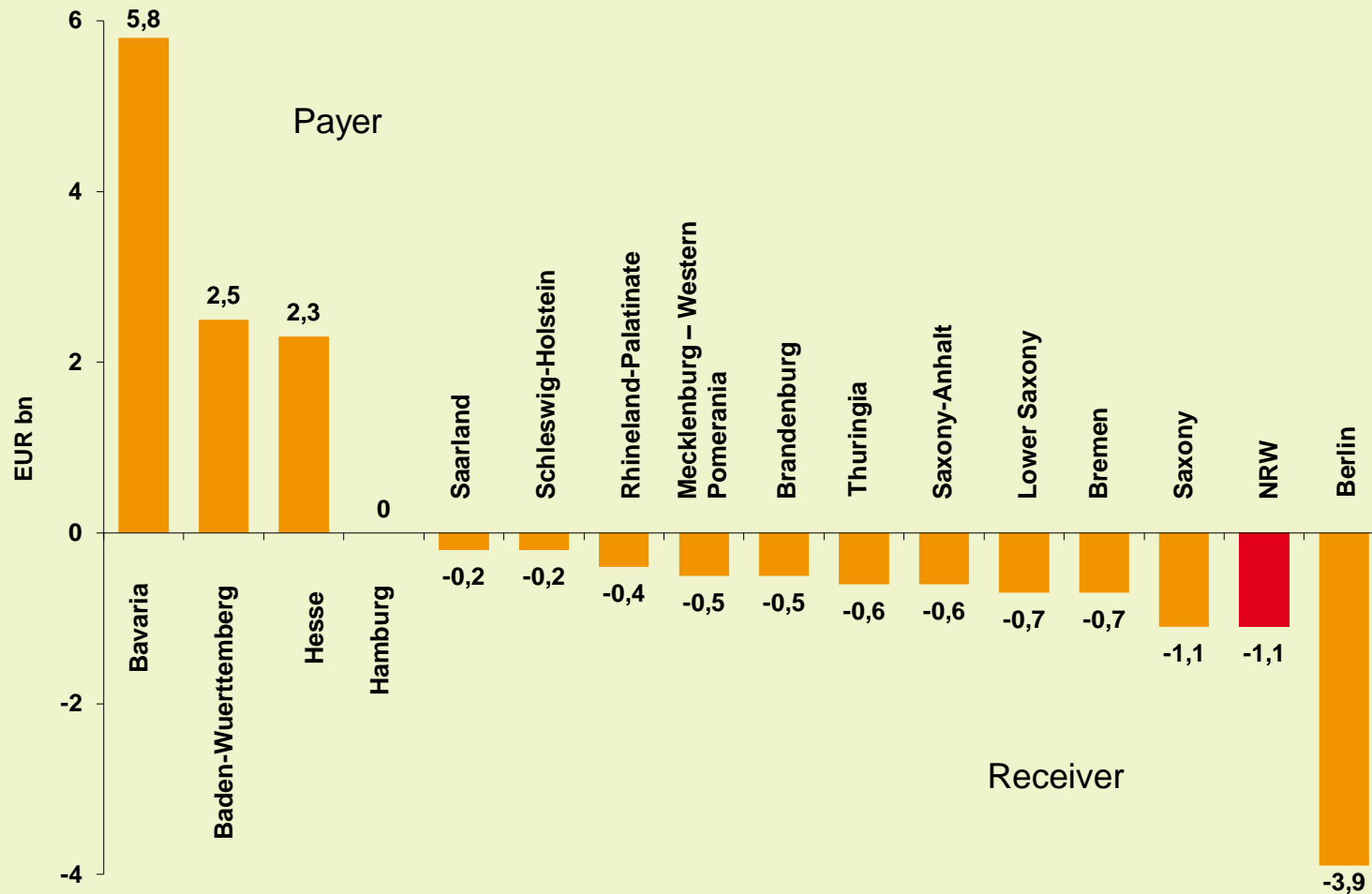


Source: Ministry of Finance NRW



Federal Equalisation System

2016 – Inter State Equalisation (2nd Step)

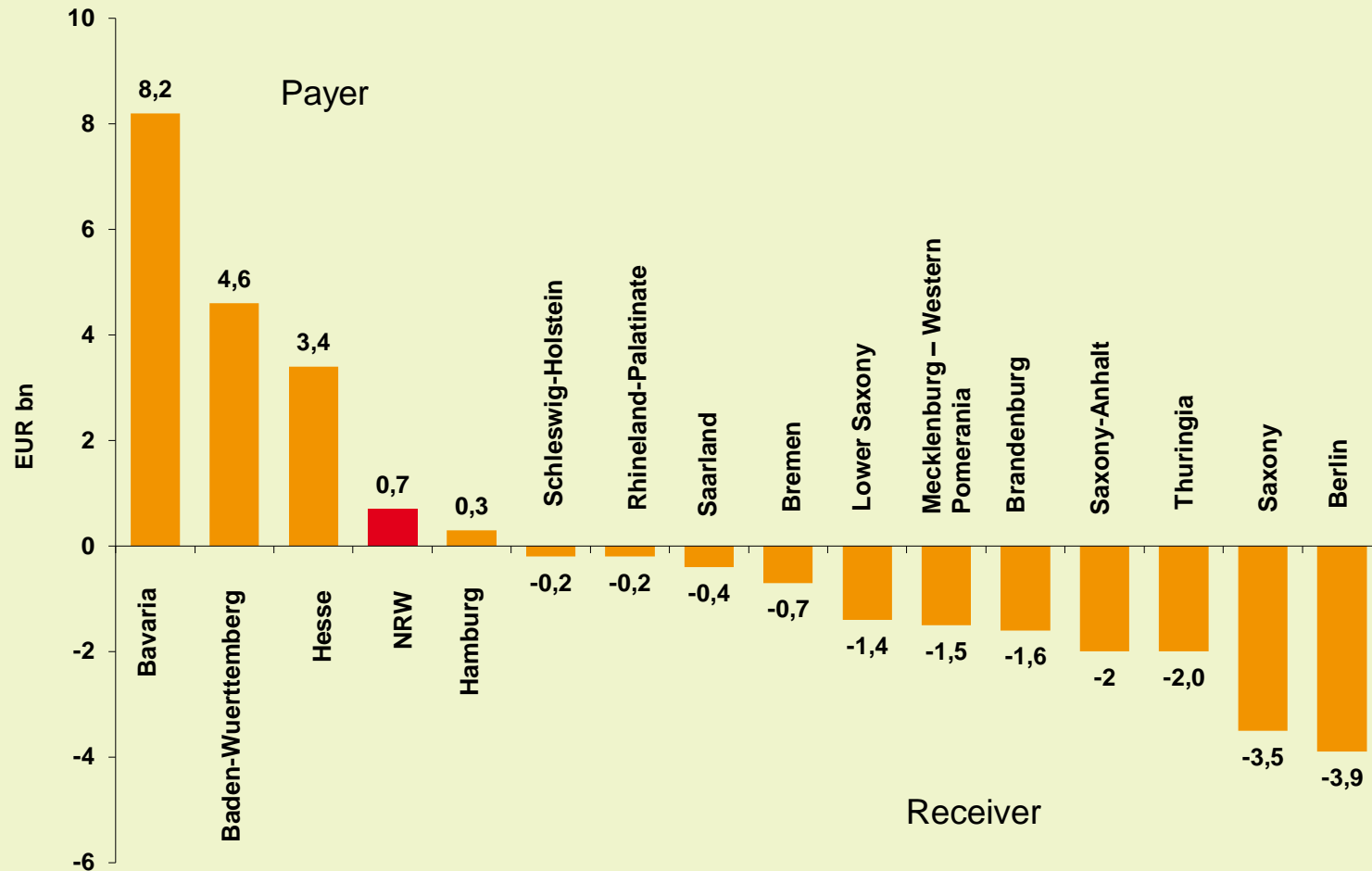


Source: Ministry of Finance NRW



Federal Equalisation System

2016 - Aggregation of 1st and 2nd Step

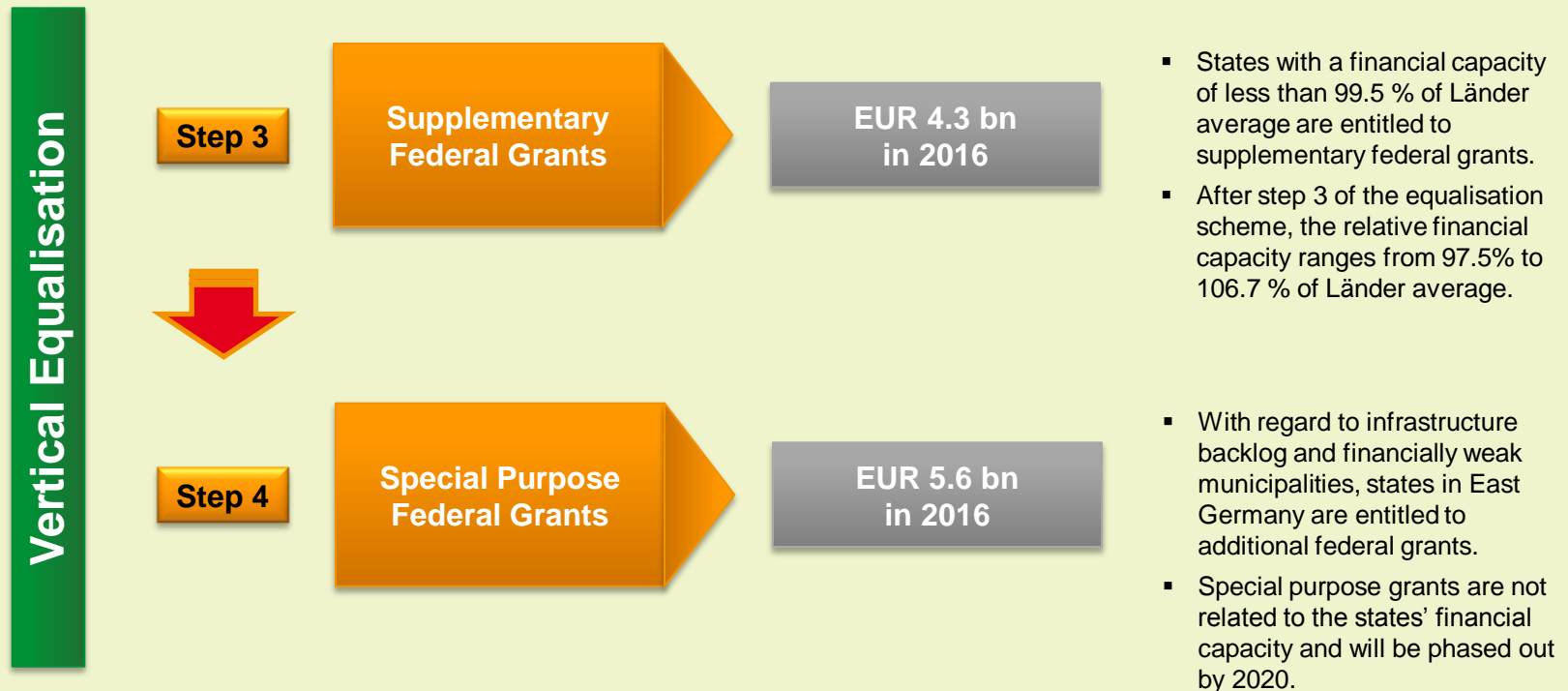


Source: Ministry of Finance NRW



Federal Equalisation System

In addition to inter state equalisation, federal grants provide additional financial support to create a level playing among all states.



Source: Ministry of Finance NRW



Reform of the Federal Equalisation System

Estimated effects on 2020 budgets (legislation still pending)



Source: Federal Ministry of Finance

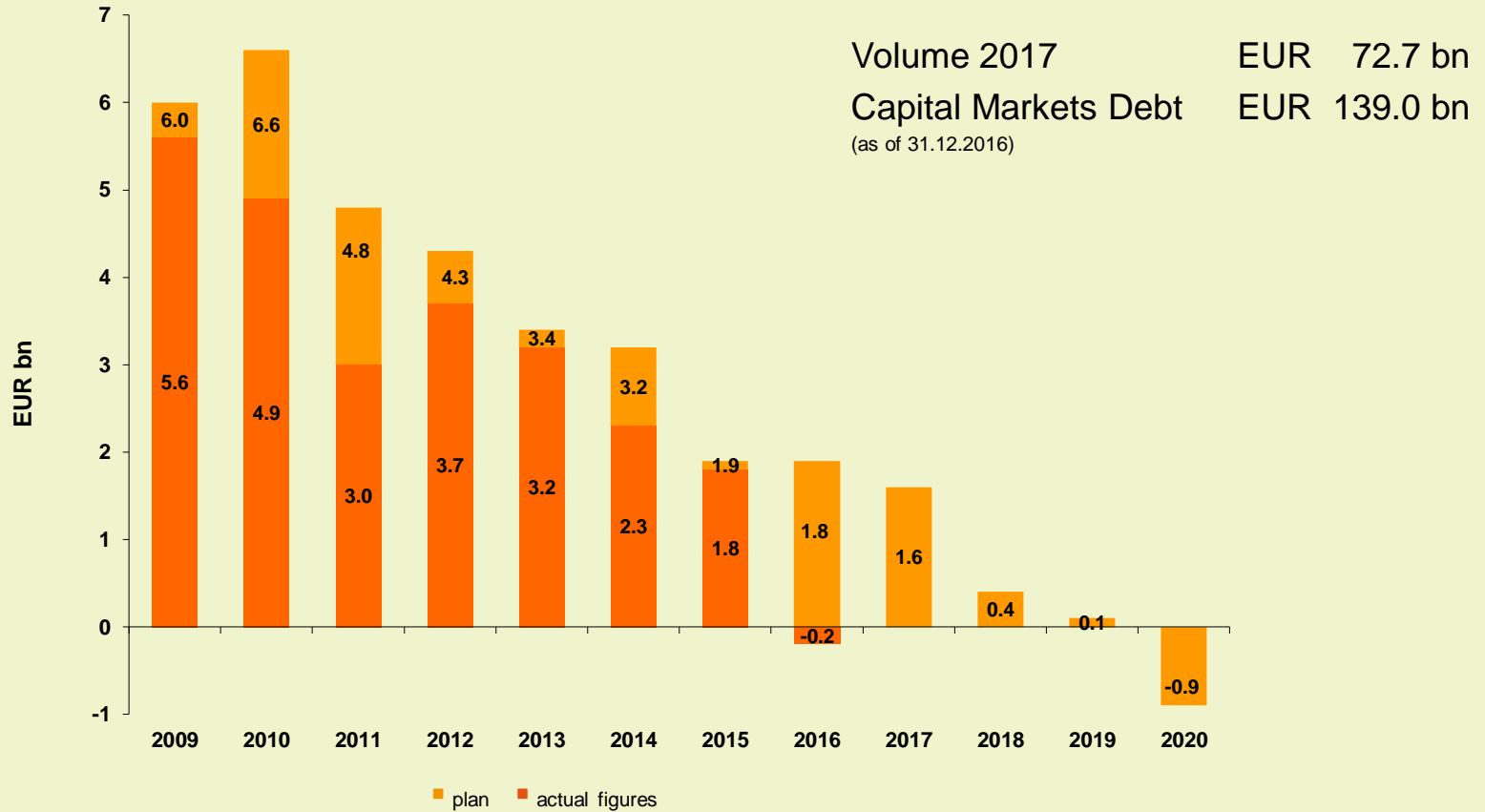


Strong Budgetary Performance

In 2016, first surplus since 1973 in the State's budget

Net Borrowing *

(down to zero by 2020 due to constitutional debt brake)



Source: Ministry of Finance NRW

* without provisions for the restructuring of WestLB / Portigon and related liability risks



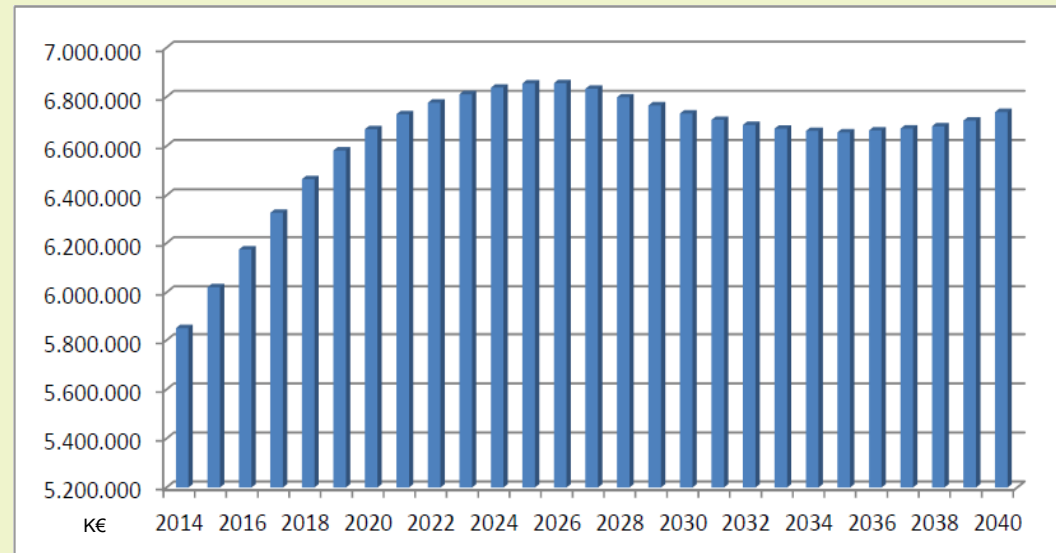
Providing for the future

With a growing number of retired civil servants, pension expenditures will continue to rise. The State's Pension Fund will help to alleviate the fiscal impact.

Pension Fund

- The State's expenditures for retired civil servants will peak in the mid 2020s.
- Since 1999 the State has set money aside to prefund a significant part of future obligations.
- With ongoing contributions, the Fund will reach a volume of more than EUR 11.0 bn in 2018.
- State Law provides for annual contributions of EUR 200m from 2018 on, thereby further reducing the burden on future budgets.

Pension Expenditures (forecast)

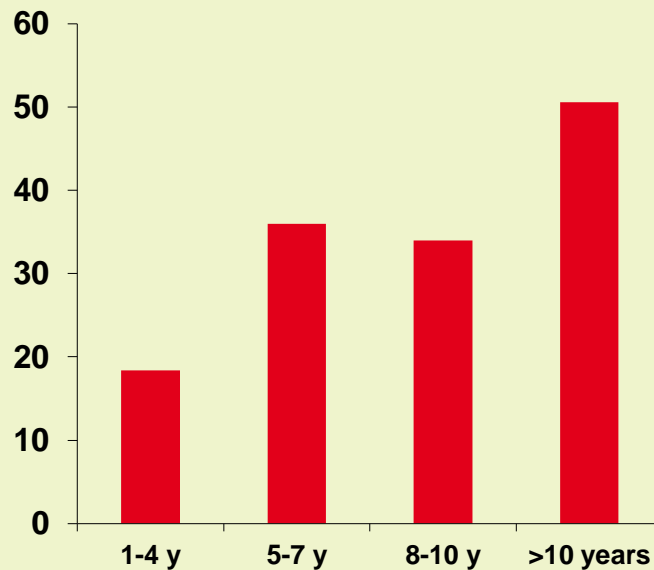




Debt Portfolio Structure

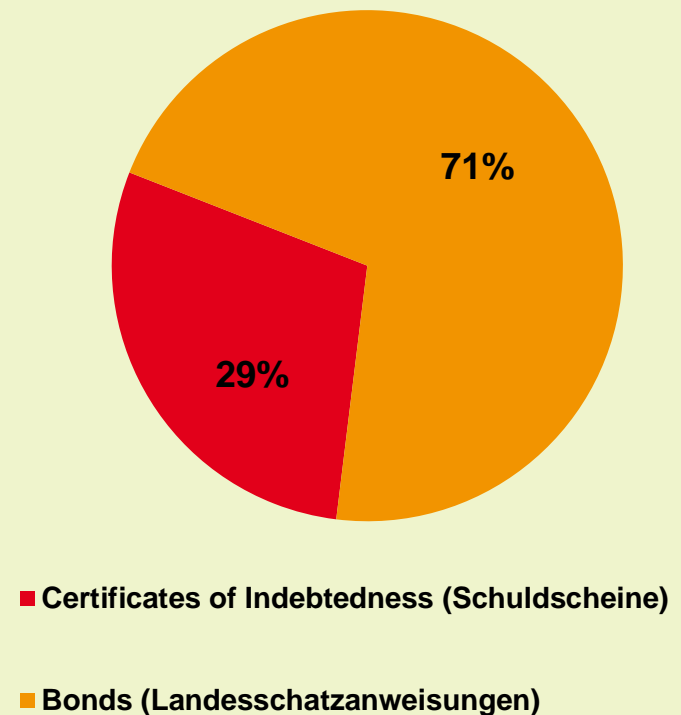
Original Maturities

(EUR bn)



Product Profile

(capital markets debt EUR 139.0 bn)



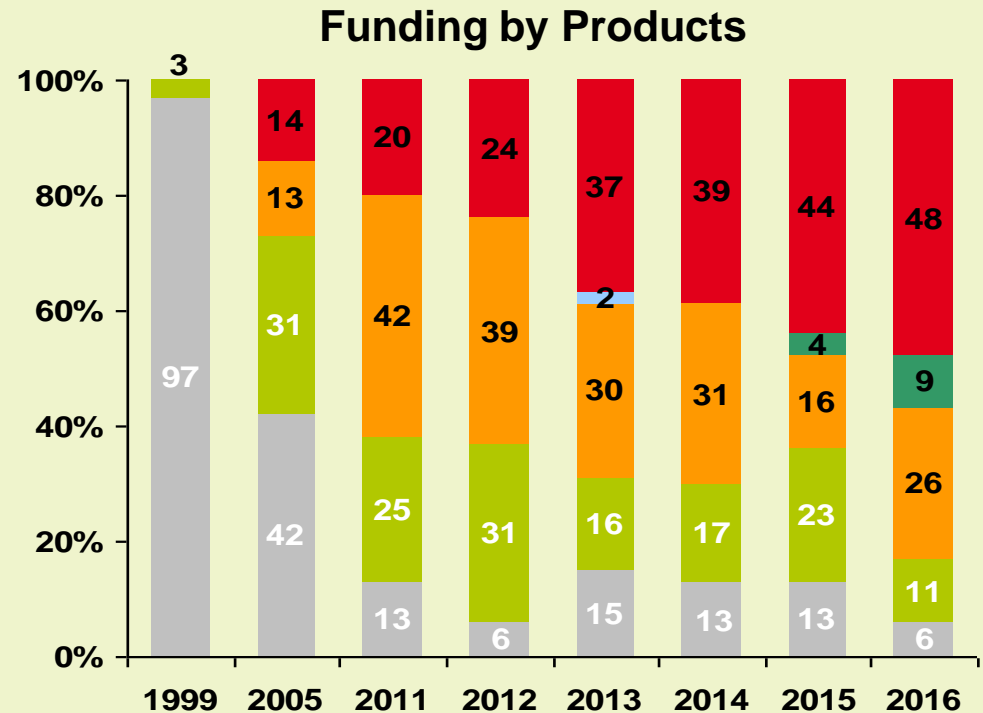
Source: Ministry of Finance NRW, as of 31.12.2016



Diversified Funding Strategy

Enhanced funding mix:

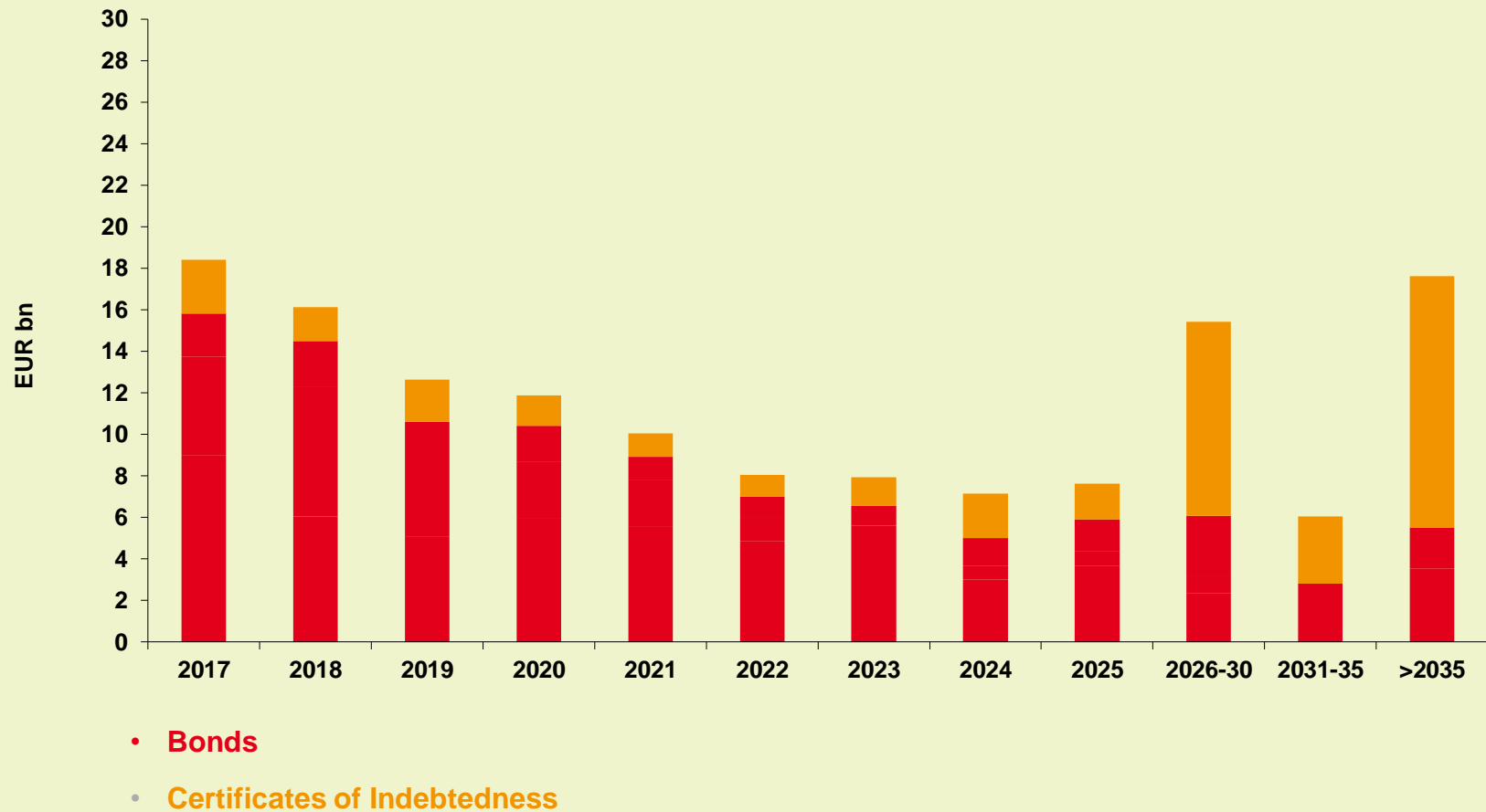
- **Benchmarks**
(EUR 1.0 bn or more)
- **Sustainability Bonds**
- **Joint Bund-Länder Issue**
- **Medium Sized Bonds**
(EUR 0.5 bn up to 1.0 bn)
- **Private placements**
(EUR < 0.5 bn)
- **Certificates of Indebtedness**



Source: Ministry of Finance NRW, as of 31.12.2016



NRW Maturity Profile

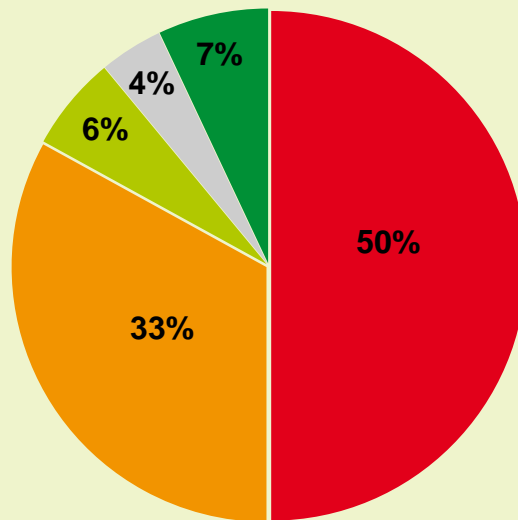


Source: Ministry of Finance NRW, as of 31.12.2016



Successful Debt Issuance Programme

Active in 18 different currencies



■ EUR ■ USD ■ JPY ■ CHF ■ others

Others: GBP, CAD, NOK, TRL, HUF, AUD, MXN, SEK, PLN, ZAR, ISK, HKD, BRL, NZD

- ✓ Introduction in October 2002
- ✓ 430 trades since introduction
- ✓ EUR 55.7 bn equivalent raised
- ✓ Outstanding EUR 28.2 bn equivalent
(in foreign currencies: EUR 13.0 bn equivalent)

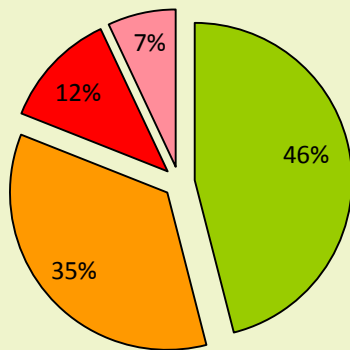
Source: Ministry of Finance NRW, as of 31.12.2016



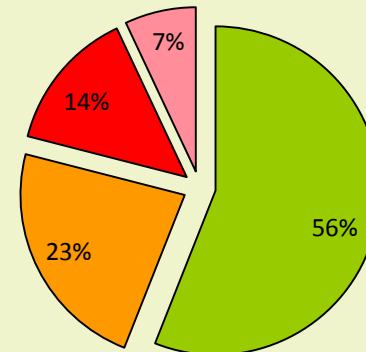
USD Bond 1.5bn

Emittent	Land Nordrhein-Westfalen
Issue Rating	Aa1 by Moody's, AA- by S&P, AAA by Fitch, all stable outlook
Issue Size	USD 1.5 bn (equivalent EUR 1.34 bn)
Status and Format	Global Bearer Note, Reg S
Maturity Date	16 September 2019
Settlement Date	30 September 2016
Coupon	1.25 % annually, 30/360
Reoffer Spread	+ 41.6 bps vs. US Treasury
ISIN	XS1496175313
Lead Managers	Barclays, Daiwa, Deutsche Bank, Toronto-Dominion

Geographical Distribution



Investor Distribution



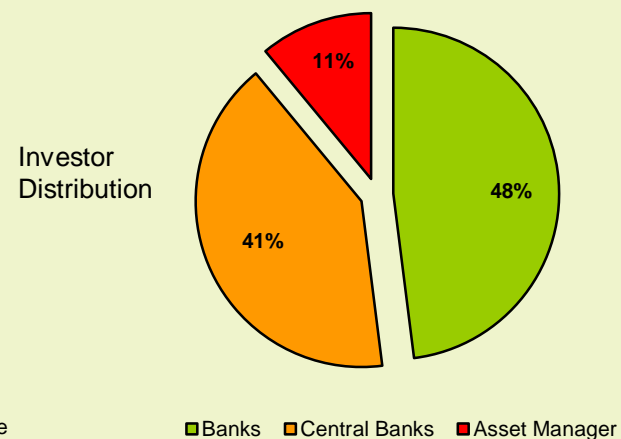
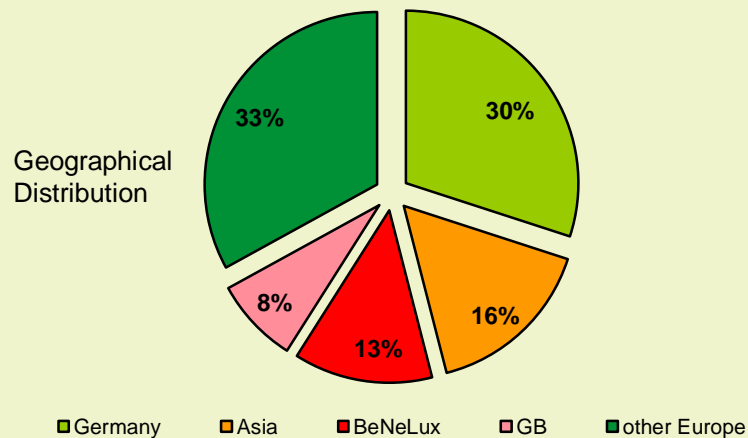
■ Europe ■ Asia ■ Americas ■ Middle East, Africa

■ Central Banks ■ Banks ■ Official Institutions ■ Asset Managers



EUR Bond 1bn

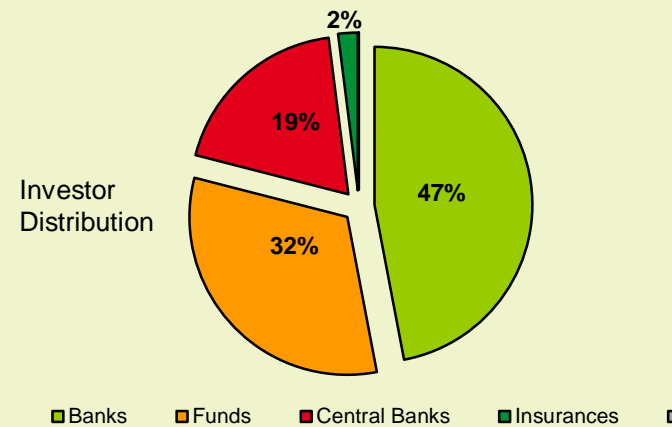
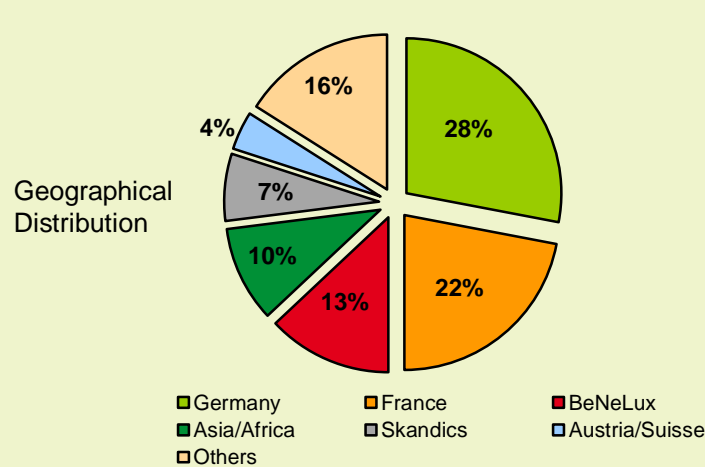
Issuer	State of North Rhine-Westphalia
Issue Rating	Aa1 by Moody's, AA- by S&P, AAA by Fitch, all stable outlook
Issue Size	EUR 1bn
Status	Global Bearer Note
Maturity Date	16 February 2024
Value Date	30 November 2016
Coupon	0.20 % annually act/act ICMA
Reoffer Spread	+35.8 bps vs. DBR 1.75% DE0001102333
ISIN	DE000NRW0J63
Joint Bookrunners	Barclays, BayernLB, Deka Bank, HSBC, LBBW



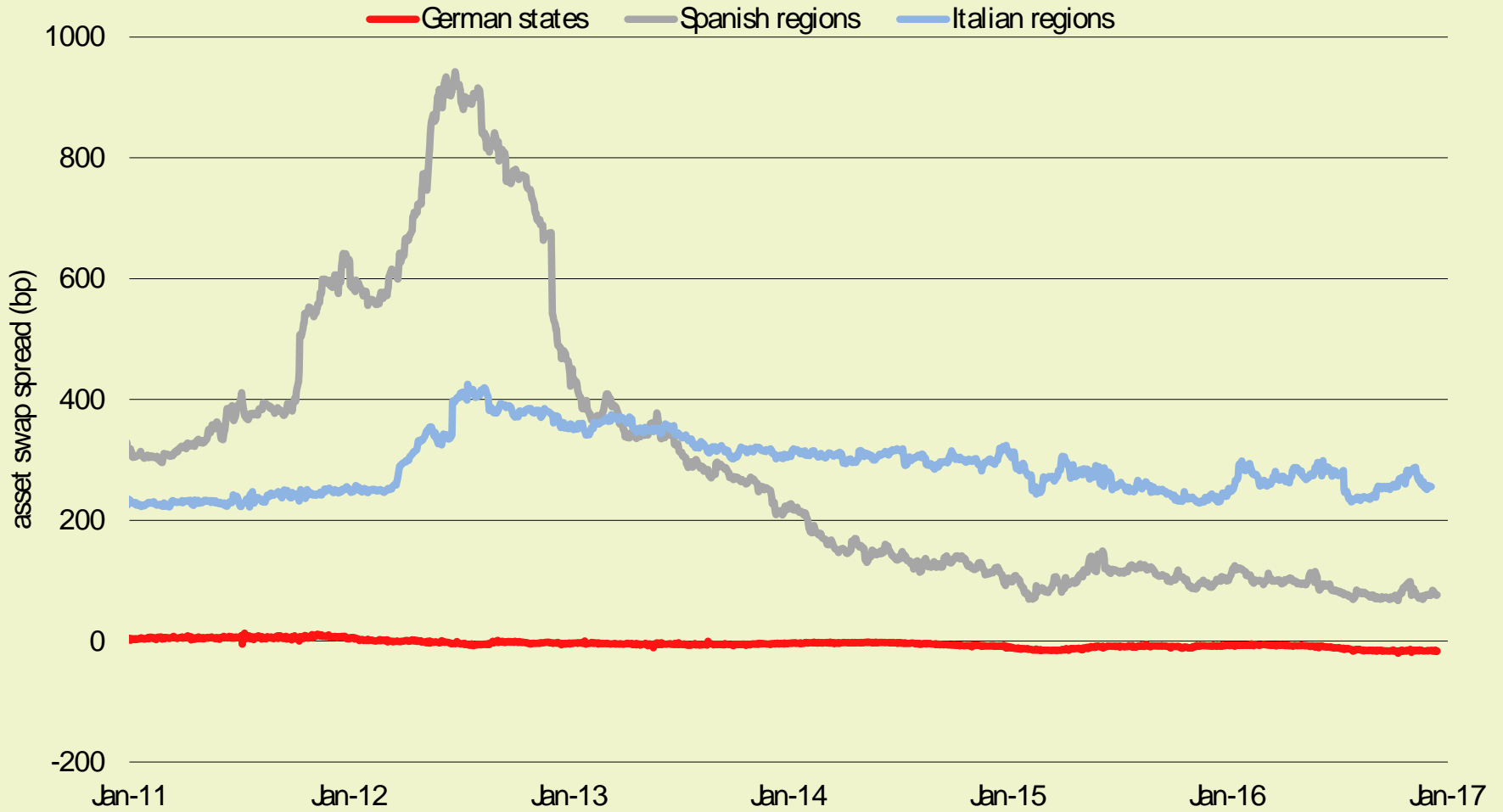


Sustainability Bond #2 EUR 1.585bn

Issuer	State of North Rhine-Westphalia
Issue Rating	Aa1 by Moody's, AA- by S&P, AAA by Fitch, all stable outlook
Issue Size	EUR 1.585 bn
Status	Global Bearer Note
Maturity Date	16 March 2023
Value Date	16 March 2016
Coupon	0.125 % annually act/act ICMA
Reoffer Spread	+ 41 bps vs. DBR (DE0001102309)
ISIN	DE000NRW0JF6
Lead Managers	BayernLB, HSBC, Bank of America Merrill Lynch, NATIXIS, UniCredit

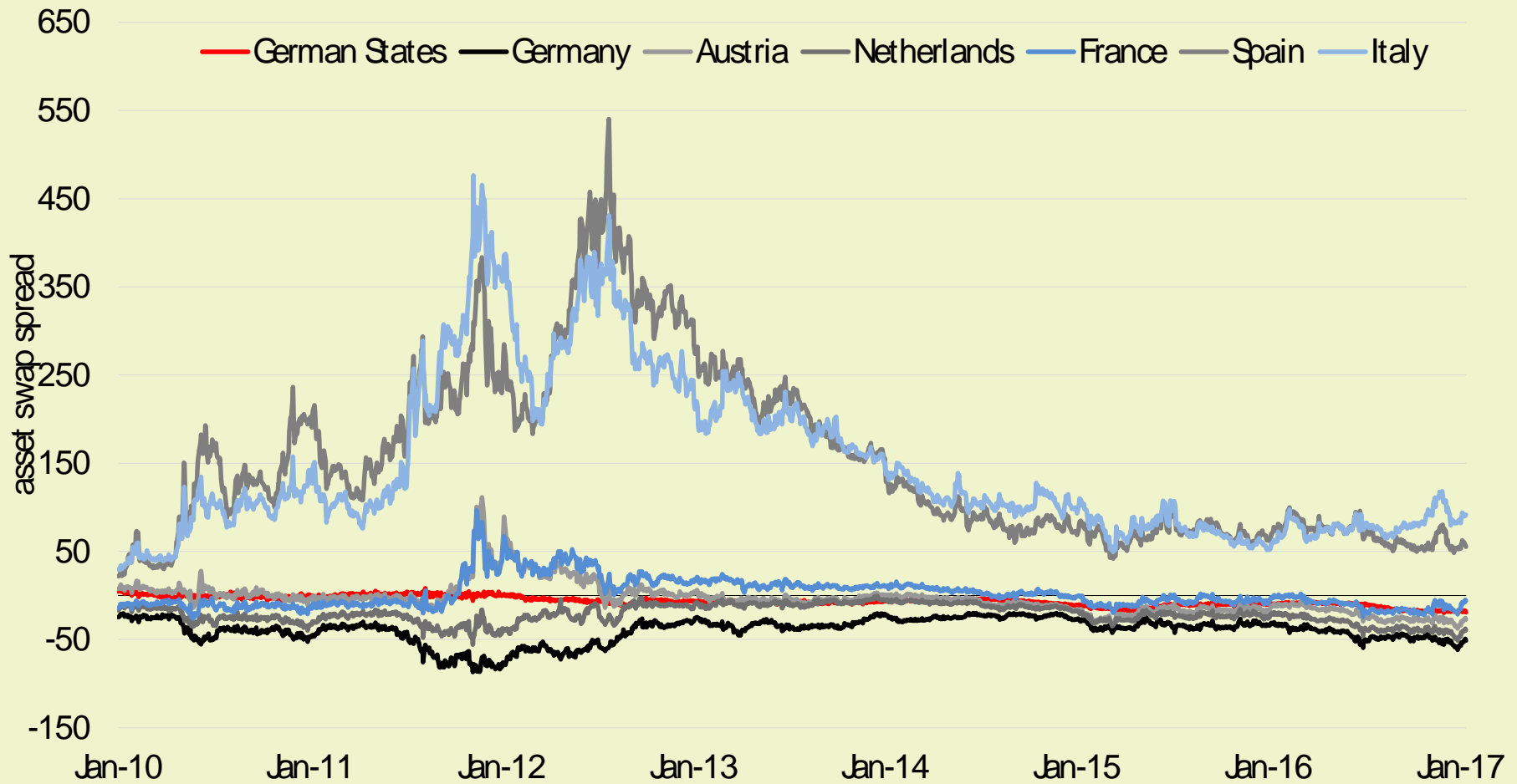


German States: Stability during the crisis



Source: iboxx, Unicredit Research

German States: Stability during the crisis





Conclusion

- German states as a homogeneous asset class
- Embedded in a well-positioned and strong economy
- Effective fiscal framework
- In 2016, first surplus in the NRW budget since 1973
- Structurally balanced budget by 2020 due to constitutional rules (“debt brake”)
- Excellent alternative to the “Bund”
 - comparable credit risk
 - attractive yield pick-up
 - more flexibility in terms of products
- Strong credit ratings
 - Fitch: AAA
 - Moody’s: Aa1 or Aaa
 - S & P: between AA- and AAA
- 0% risk weighting in most countries
- German Federal States issuances qualify as level 1 assets under the EU Commission’s Delegate Regulation on the liquidity coverage ratio (LCR)



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