Risk Deep Dive

Stuart Lewis
Chief Risk Officer

James von Moltke
Chief Financial Officer

18 June 2020

Deutsche Bank

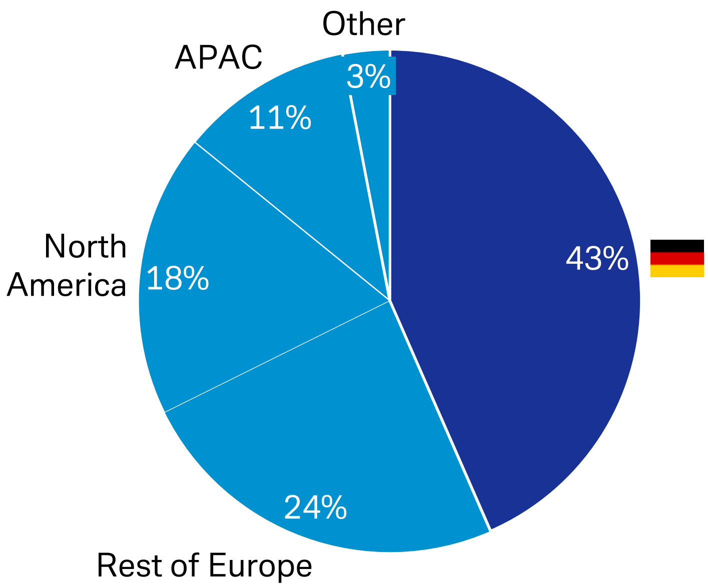
Summary

- Home market in Germany is a source of strength
- Conservative balance sheet provides solid foundation to manage upcoming challenges
- Investments in risk framework, controls and technology facilitate timely and proactive risk management
- Well diversified loan book with strong collateral and active hedging mitigate downside risk
- Reaffirm 2020 credit loss provision and capital guidance

Our business is strongly rooted in Germany

Q1 2020

Revenues (FY 2019)



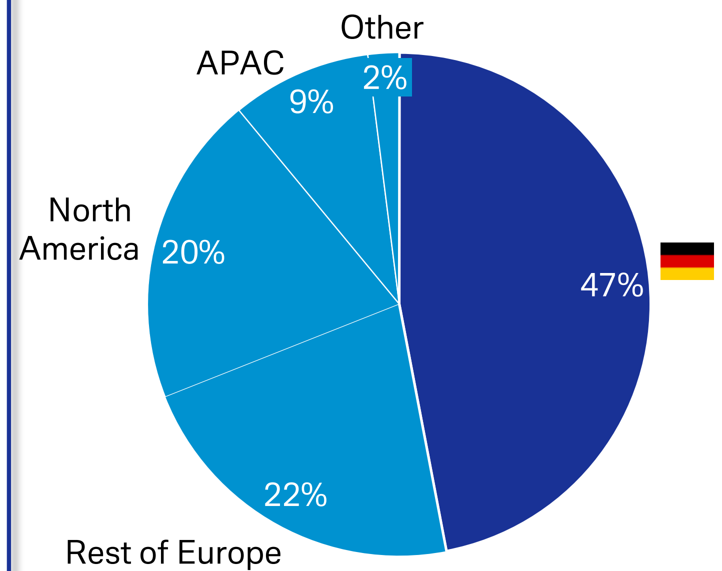
Access point to state sponsored lending as 'Hausbank' to ~900k corporate and commercial clients

Leading German corporate finance franchise – 14% market share in 1Q20

Reinforced position as leading German retail bank

Provided liquidity and solutions as the #1 domestic retail asset manager

Loans(1)

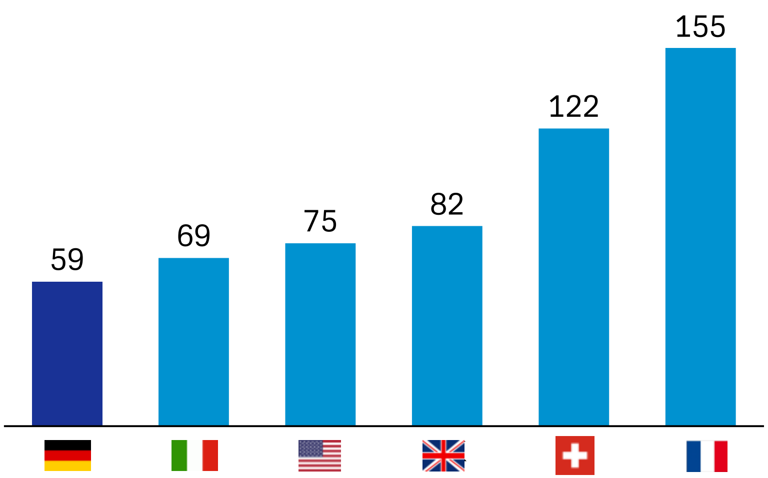


(1) Gross of allowances for loan losses

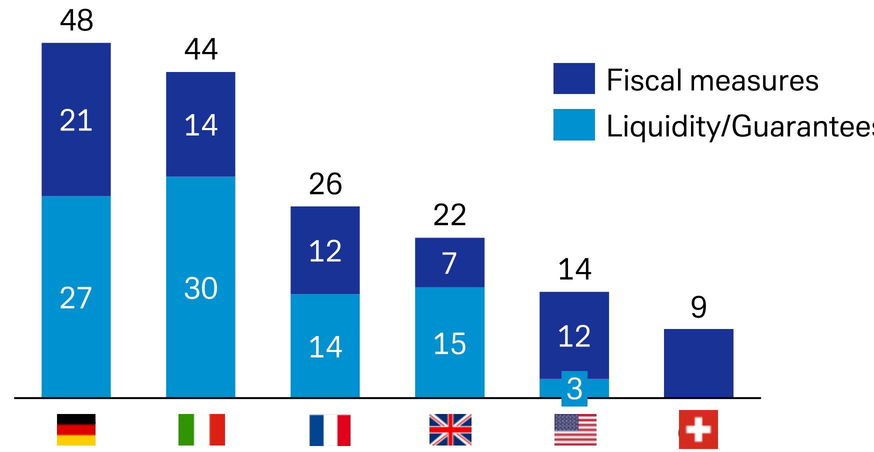
Germany is one of the most resilient economies in this crisis

As a % of 2019 GDP

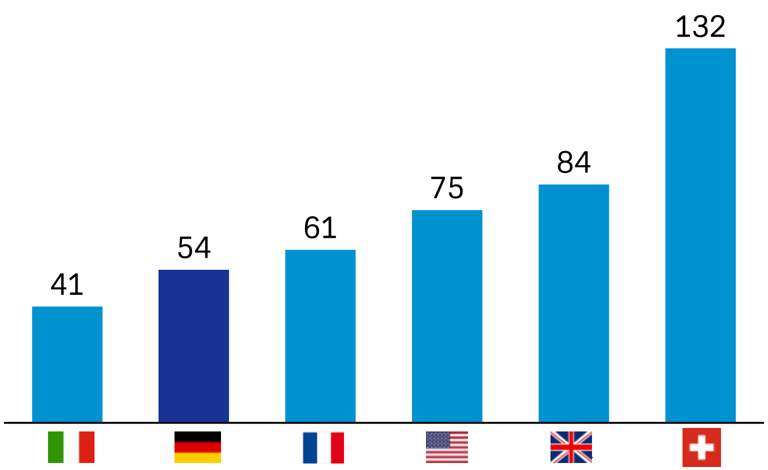
Corporate debt



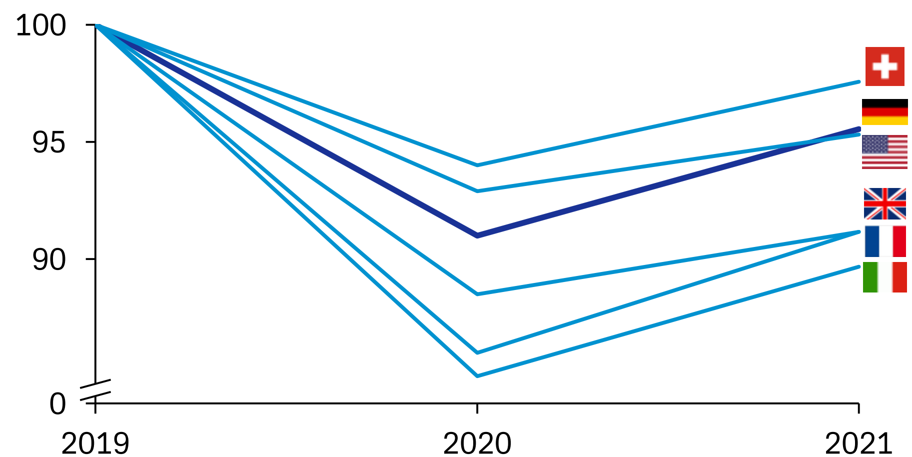
Announced government COVID-19 measures



Household debt



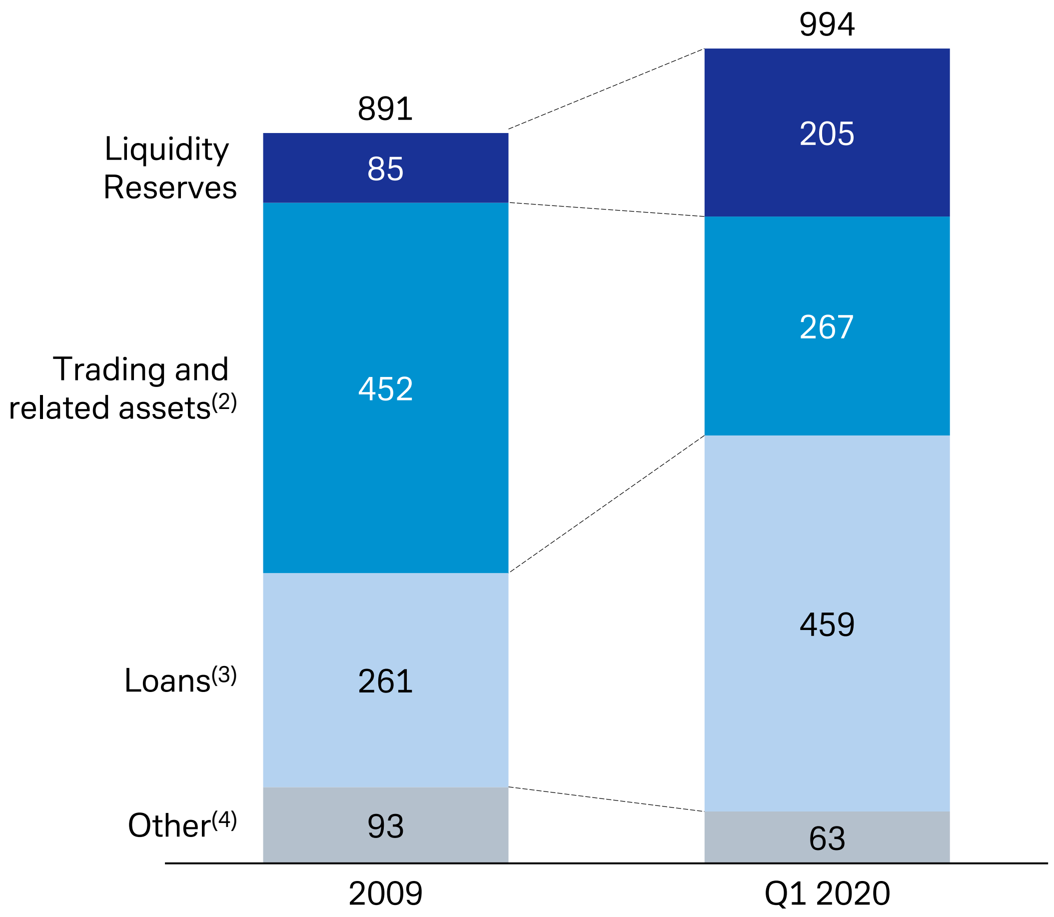
GDP growth estimates (indexed to 2019)



Source: Corporate debt, Household debt: IMF, Bundesbank; announced COVID-19 measures: Bruegel, swissinfo; GDP growth estimates: DB Research

We have transformed the balance sheet since 2009

After netting(1), in € bn



- Liquidity Reserves increased to 20% of net balance sheet
- Trading and related assets (including derivatives) reduced to ~25% of net assets Primarily government bonds and short-term secured financing assets
- Almost half of assets in high quality loan portfolios, dominated by German mortgages
- Non-investment grade bridge exposure significantly reduced versus 2009 with better hedging

(1) Net balance sheet of € 994bn is defined as IFRS balance sheet (€ 1,491bn) adjusted to reflect the funding required after recognizing (i) legal netting agreements (€ 353bn), cash collateral received (€ 51bn) and paid (€ 43bn) and offsetting pending settlement balances (€ 51bn)
(2) Trading and related assets includes debt and equity securities (excluding highly liquid securities), derivatives, repos, securities borrowed and lent, brokerage receivables and payables, loans measured at fair value
(3) Loans at amortized cost, gross of allowances
(4) Other assets include goodwill and other intangible, property and equipment, tax assets, cash and equivalents which are not part of liquidity reserve, and other receivables

Stronger balance sheet and risk metrics

	2009	Q1 2020
Common Equity Tier 1 capital ratio	8.7%(1)	12.8%
Provision for credit losses as % of loans	101bps	44bps
Average Value-at-Risk(2)	€ 127m	€ 24m
Most Stable Funding(3)	54%	82%
Liquidity Reserves	€ 85bn	€ 205bn
Level 3 assets	€ 58bn	€ 28bn

(1) Basel 2
(2) Trading Book Value-at-Risk at 99% confidence level and a 1 day holding period
(3) Most stable funding as a % of total external funding profile. Most stable funding is defined as funds from Capital Markets & Equity, Private Bank and Corporate Bank for Q1 2020, and Capital Markets & Equity, Retail and Transaction Banking for 2009

Benefitting from investments in our control environment

~€ 900m investments in technology across Risk, Anti Financial Crime and Compliance in 2017 – 2019

Aggregate investments in technology and controls to increase further in 2020

Anti-Financial Crime / Compliance

- Daily name list screening of all clients against sanctioned entities, politically exposed persons, internal criteria
- >1 million communications monitored on a daily basis across all voice and electronic platforms in 12 languages

Liquidity Risk

- New business aligned front-to-back architecture
- Comprehensive improvements to stress test methodologies
- New business level funds transfer pricing to optimize allocation decisions
- Daily T+1 liquidity risk and LCR reporting

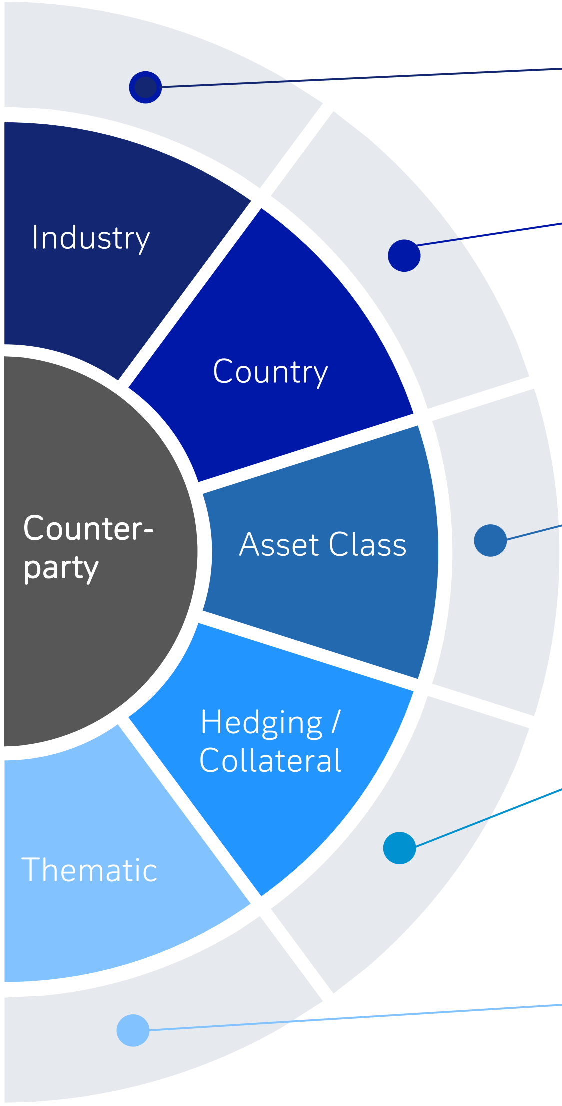
Credit Risk

- Implemented new credit system with integrated workflow from rating assessment to transaction approval
- More granular and better integrated data supports more comprehensive portfolio management capabilities
- Up to date key portfolio data (90% + of data is updated on a daily basis)

Market Risk

- Historical Simulation implemented for Risk Management
- Improved accuracy, granularity, control and risk management
- Now performing ~15bn trade revaluations daily

Managing credit concentration risk on multiple dimensions



- Industry risk thresholds set for 27 corporate and financial institution portfolios

- Country risk thresholds set for all EM countries (generally no country credit RWA greater than 3%) and for all countries rated iA+ and below

- Country and industry risk developments assessed via internal ratings, risk flags, regular and ad-hoc portfolio reviews

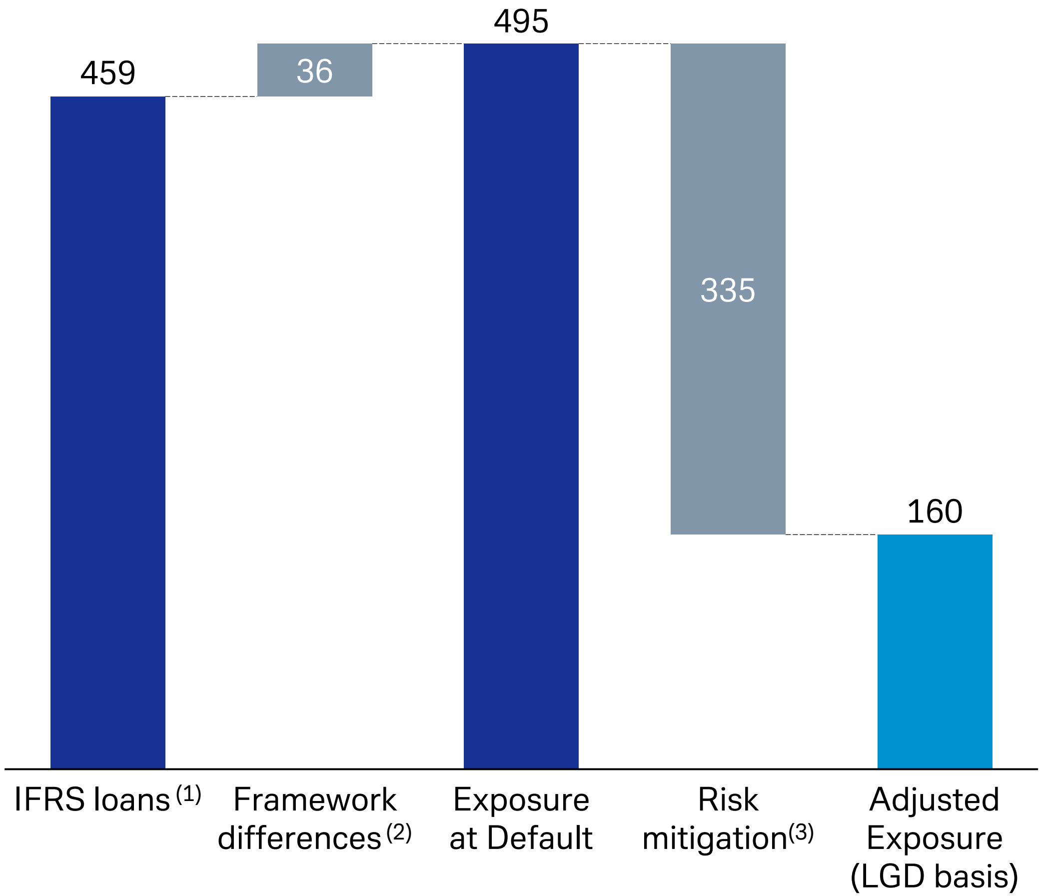
- Risk thresholds and strategies set for specialised risk buckets, e.g. Commercial Real Estate, Leveraged DCM, Underwriting

- Hedging framework across loan portfolios to reduce single name concentrations down to rating based thresholds
- Lower rated, larger exposures in EM actively managed via Private Risk Insurance and Export Credit Agency cover
- Active hedging of underwriting book

- Ad-hoc thematic reviews and stress testing identify concentrations to particular events
- Recommendations to reduce exposure where downside impacts are outsized

Significant risk mitigation of loan book exposures

Q1 2020, in € bn

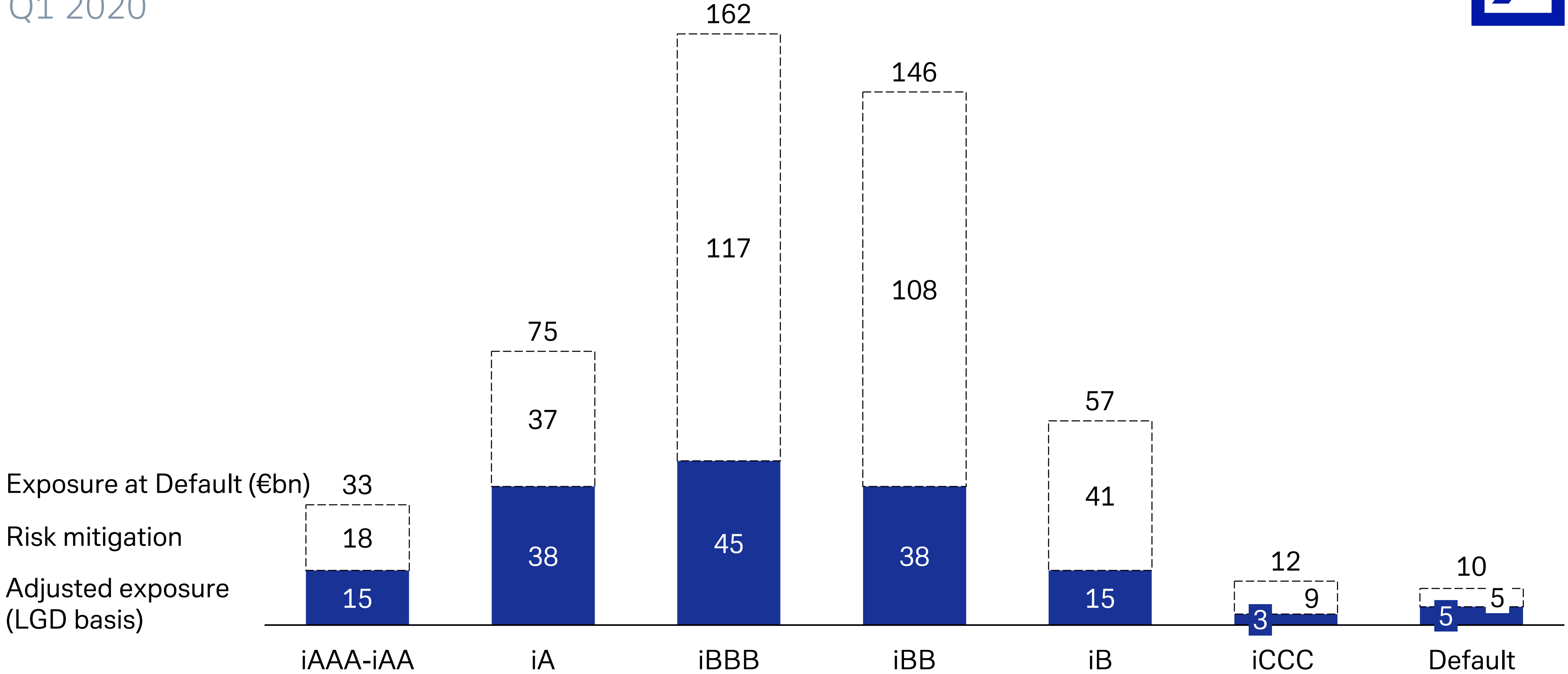


- Exposure at default significantly mitigated by asset collateral and hedging, including:
  - €232bn of asset collateral including property, cash & deposits and financial instruments [4]
  - €23bn of CLOs (nominal) to hedge single name risks to rating based thresholds under established framework [4]
  - Additional structural collateral in certain asset classes (e.g. LDCM)
- Other mitigants actively used but which are not considered in adjusted exposure include Export Credit Agency & Private Risk Insurance and CDS which are incorporated in lower Probability of Default assumptions

(1) Loans gross of allowances for loan losses
(2) Principally reflects the inclusion under Exposure at Default of undrawn commitments (after credit conversion factor) partially offset with CLO relief
(3) Risk mitigation reflects difference between EAD and Adjusted Exposure (LGD basis), thereby reflecting asset collateral, hedges and other risk mitigation
(4) References are not fully comparable to LGD adjusted exposure

Modest vulnerability to loss in lower rated buckets

Q1 2020



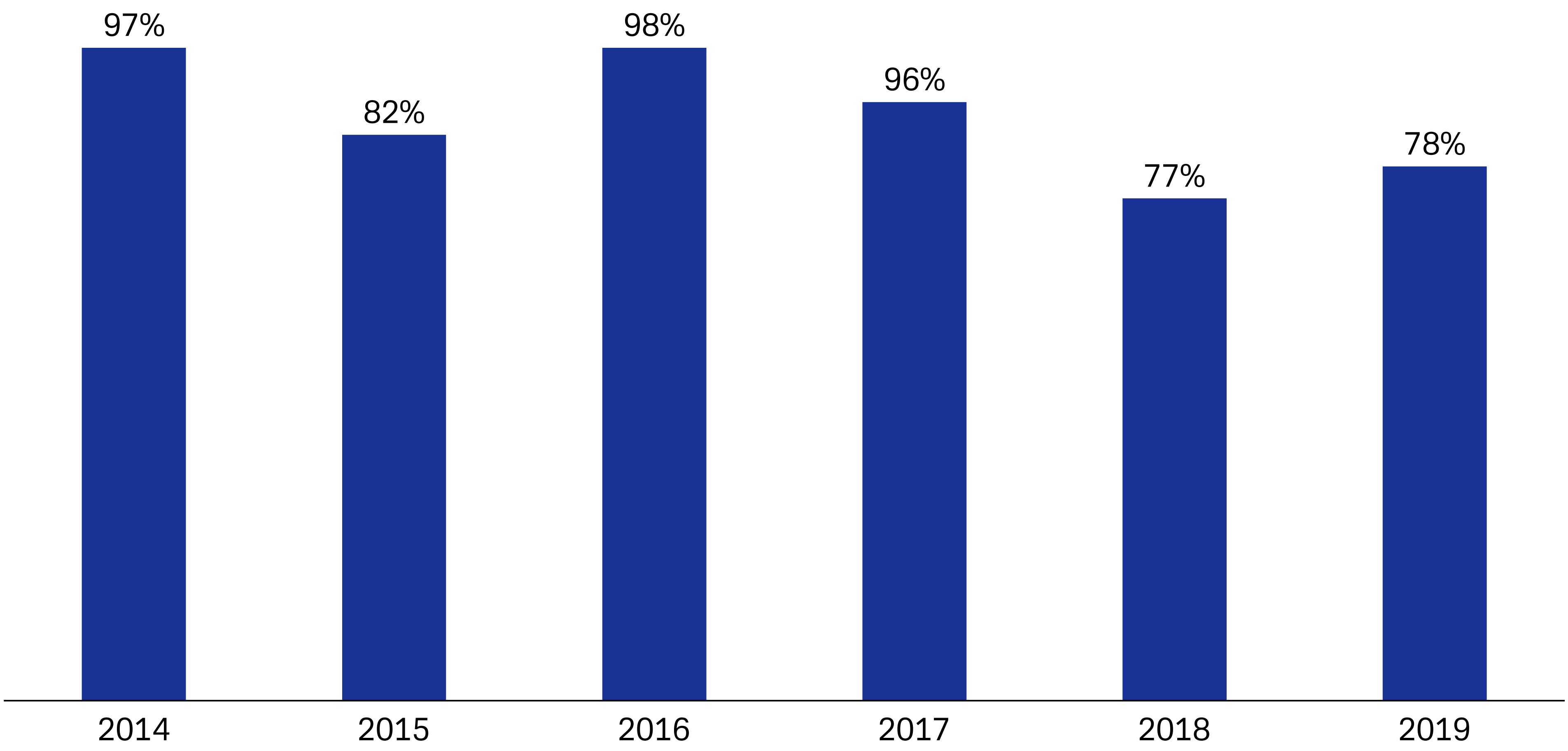
	iAAA-iAA	iA	iBBB	iBB	iB	iCCC	Default
Probability of default (bps)	0 - 4	4 - 11	11 - 50	50 - 227	227 – 1,022	>1,022	N/A
Regulatory Expected Loss (€m) (1)	3	15	103	329	498	390	2,407
Allowance for credit losses (€m)	3	9	69	322	596	263	3,052

(1) Excludes Purchase of Credit Impaired (POCI) assets

Conservative approach to credit loss provisions

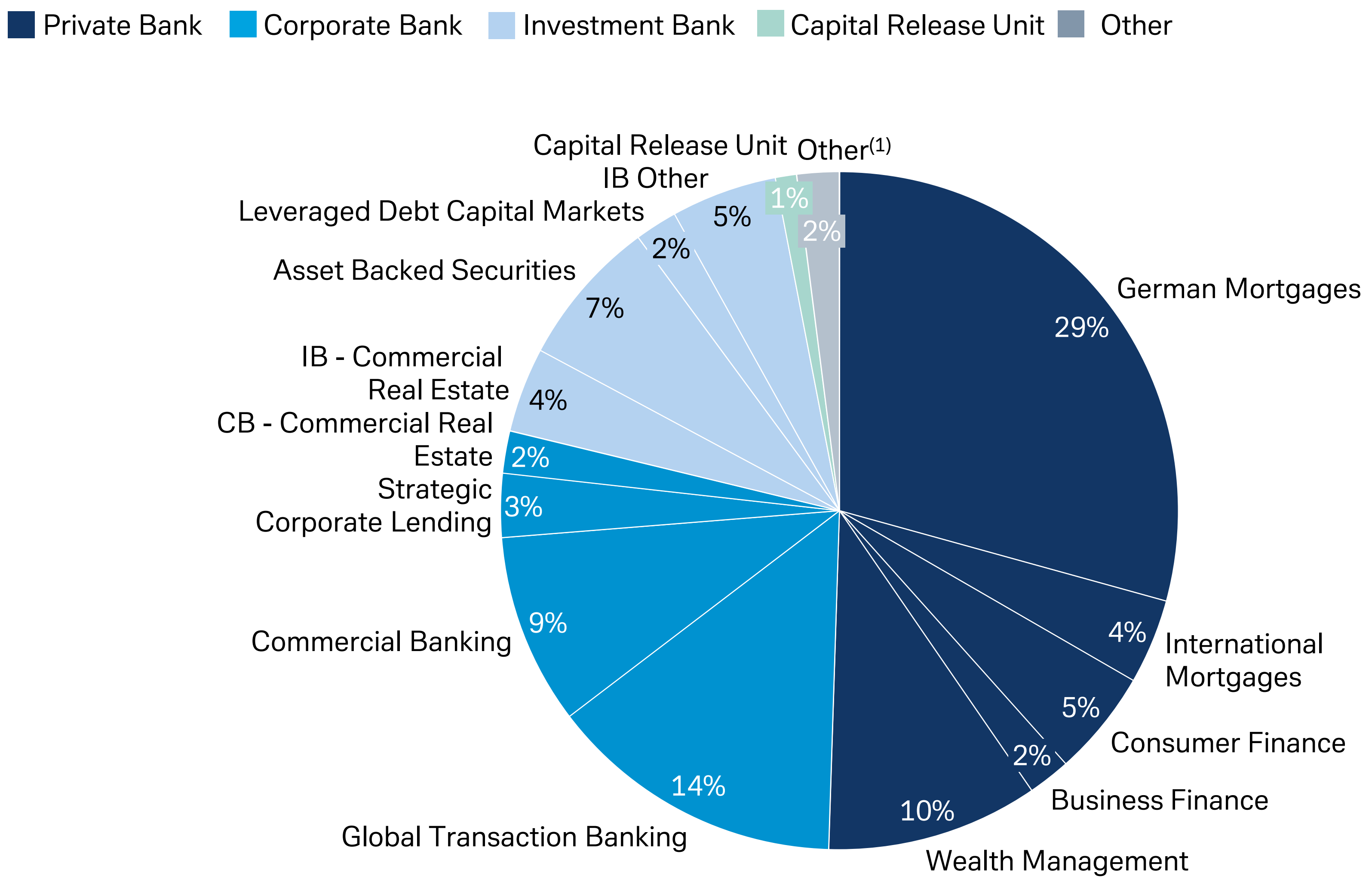
Gross charge-offs as a % of gross provisions for credit losses

Realized charge-offs have been ~90% of average credit loss provisions



Diversified loan portfolio

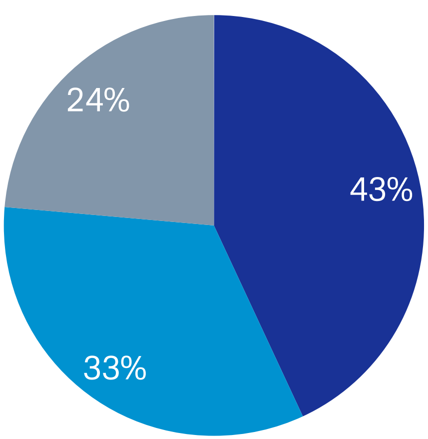
Q1 2020 IFRS 9 loans: € 459bn



Note: Loan amounts are gross of allowances for loan losses
(1) Mainly Corporate & Other

Global Credit Trading Loan Portfolio: high quality & resilient

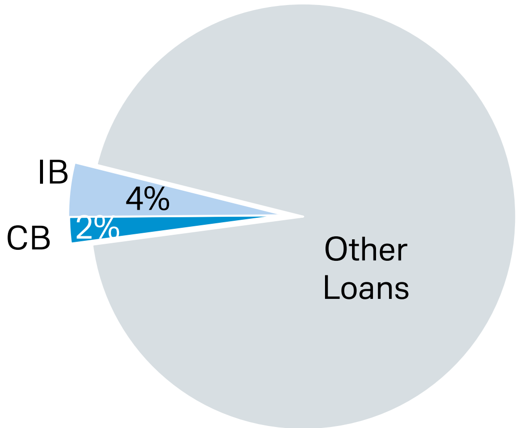
Global Credit Trading Portfolios



Global Credit Trading Portfolio (€ 72bn)	— Short tenor: ~40% less than 2 years, ~85% less than 5 years — High quality: ~50% Investment Grade , ~6% rated CCC+ or lower — Diversified: top 10 names account for 11% of portfolio, € 40m average size — Resilient: ~80% of portfolio with moderate or no exposure to COVID-19
Asset Backed Securities (ABS) (€ 31bn)	— High quality: median rating iA- supported by strong credit enhancement — Diversified: by asset class and servicer, ~70% US / ~30% EU — Resilient: Average 5 year CLPs[1] 1 bps — Credit enhancement covers multiple times loss expectations
Commercial Real Estate (CRE) (€ 24bn)	— High quality: Largely first lien, ~60% average loan-to-value — Diversified: top 10 names account for 10% of portfolio, € 58m average size — Resilient: Manageable exposure to hotels and retail, high quality sponsors
Other (€ 17bn)	— Well diversified including Infrastructure & Energy, Transportation and Project Finance — Aviation (€ 3.6bn): >60% of fleet less than 10 years old, updated valuations in May with moderate loss expectations; substantial share cross-collateralised portfolio financing — Shipping (€1bn): adjusted valuations with no material losses expected

(1) Average net provision for credit losses annualized as % of loans at amortized cost (from 2015 – Q1 2020)

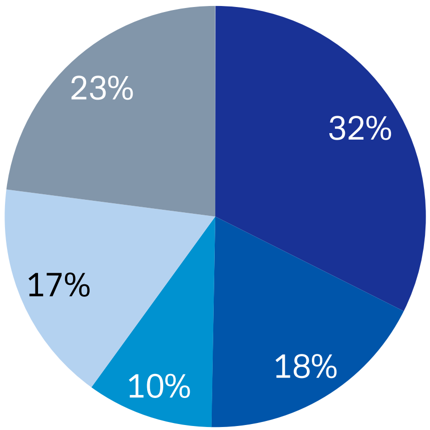
Commercial Real Estate: high quality, tightly managed



Commercial Real Estate (€ 33bn)

- Investment Bank (€ 24bn): weighted average LTV ~60%
  - High quality: 63% in the US, focused on gateway cities ~27% New York, ~16% Los Angeles, ~9% San Francisco[1]
  - Resilient: manageable exposure to hotels and retail with high quality sponsors and high quality tenants
  - 75 COVID-19 related loan modification requests approved to date, typically mitigated by additional equity contribution from sponsors
  - Diversified: top 10 names are 10% of portfolio, € 58m average
- Postbank (€10bn): weighted average LTV 55%, ~ 50% low- risk senior secured recourse e.g. regulated open-end funds, €23m average exposure per name
- Portfolios managed to tight underwriting standards with regular stress tests under conservative assumptions

IB - Commercial Real Estate Asset Classes



Details on IB CRE asset classes

Office (€ 9bn)
- Weighted average LTV 58%
- High quality portfolio with limited impact from COVID-19

Hotels (€ 5bn)
- Weighted average LTV 60%; 75% in US (of which NY 26%); well diversified
- Hotels closed or at low occupancy; projected 2-3 year recovery period
- Significant equity cushion mitigates potential decline in values

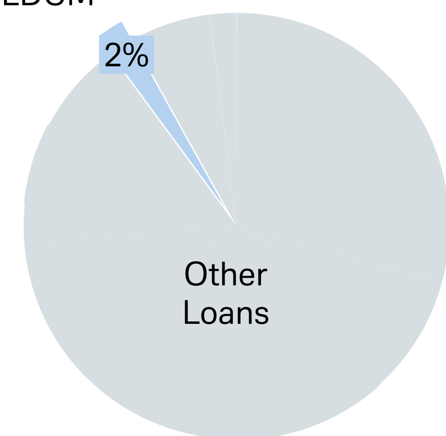
Retail (€ 2bn)
- Weighted average LTV 54%; >50% in the US with concentration in NY
- Relatively limited exposure; high quality sponsors, moderate LTV and quality of assets mitigate COVID-19 sales impact and risk of store closures

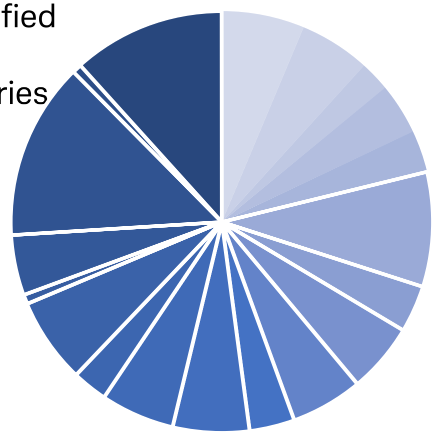
Residential (€ 4bn)
- Weighted average LTV 63%
- High quality diversified portfolio; no material impact from COVID-19 on rent collections to date

Other (€ 5bn)
- Includes mixed-use, industrial with weighted average LTV <60%
- €1bn condo portfolio with concentration in NY; recent slowdown in sales exacerbated by COVID-19, mitigated by moderate LTVs of 52%

Note: LTVs based on pre-COVID-19 valuations
Totals may not sum due to rounding differences
(1) All in % of loans and undrawn commitments

LDCM Loan Portfolio: well-managed risk





LDCM portfolio (€ 11bn)

- LDCM portfolio typically reflects unfunded commitments held and not syndicated to the loan capital market; positions provide an anchor for recurring fee business with the client
- Broad industry and client diversification driven by low single-name risk appetite

Cash flow based lending (€ 9bn)

- Mainly revolving credit facilities
- All exposure 1st lien senior secured or super-senior debt; no appetite for funded term or junior ranking debt
- Diversified: top 10 names account for 15% of portfolio, € 22m average size
- Largest sectors are Healthcare, REGLL[1], Technology and Telecom
- Resilient: ~20% exposure to most impacted COVID-19 sectors

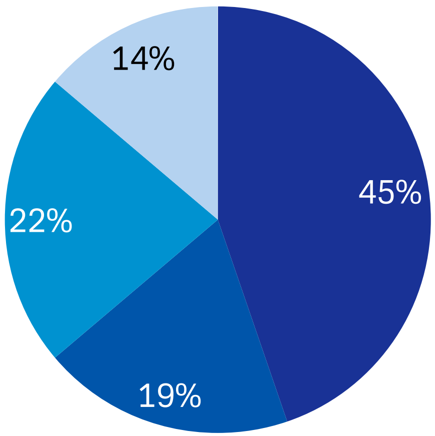
Asset based lending (€ 2bn)

- Exclusively US-based product used in corporate leveraged transactions
- Origination and monitoring by dedicated specialist product team. Usually self-liquidating borrowing base (e.g. receivables/inventory) with negligible loss history

(1) Real Estate, Gaming, Lodging, Leisure

Underwriting pipeline

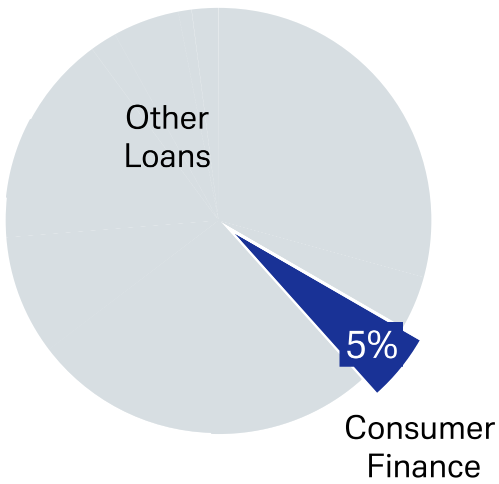
Q1 2020: € 19bn[1]



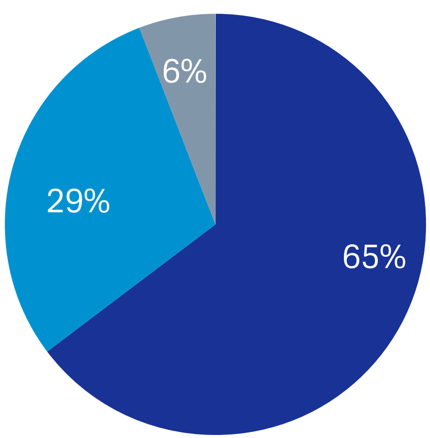
Corporate Investment Grade (€ 8.4bn)	— Mainly M&A driven acquisition facilities with de-risking timelines often driven by competition authority approvals / M&A timelines — Includes loan syndication and bond bridges – bank loan and IG bond markets have been open and resilient throughout the crisis — DB does not carry market pricing risk – no mark-to-market losses expected
Commercial Real Estate (€ 3.8bn)	— Split evenly between syndication and CMBS loans — Largely first lien with ~ 62% average LTV — Market risk hedged through CMBX and CDX index to help mitigate losses — ~ 25% exposure to higher COVID-19 affected names with expected delays in sell down
LDCM (€ 4bn)	— Diversified book with ~€250m average commitment size — Protocol to hedge market risk significantly offset potential losses in Q1 — Largest positions not COVID-19 impacted. To be de-risked in Q2/early Q3 2020 as markets reopen — ~20% to highly COVID-19 impacted names with de-risking expected in Q3/ Q4 2020
Other (€ 2.8bn)	— ~60% Asia Pacific; no O&G, Aviation; limited Retail. 60% in 3 large Developed Markets CRE assets / limited COVID-19 concern — ~40% Global Credit Financing Solutions diversified by industry and geography

(1) Recorded as fair value and therefore not part of the € 459bn loans at amortized costs

Consumer Finance – Low delinquency & high coverage ratios



Consumer Finance Portfolio (€ 24bn)	— Principally unsecured loans to private households with limited credit card exposure (€ 1.5bn) — Best in class with delinquency ratio (below 2%) reflecting strict lending standards — Risk-adjusted pricing generates sufficient margin to cover risks — Good stage 3 coverage (>60 %) given good recovery rates — 113,000 requests for payment moratoria received since 28th Feb 2020, of which 90% approved



Germany (€ 15bn)	— 90% personal loans, 6% credit cards, 3% car loans, 1% other — 0.5% 90+ days past due
Italy (€ 7bn)	— 50% personal loans, 30% car loans, 10% Point of Sale, 5% credit cards, 4% salary loans, 1% other — 1.5% 90+ days past due
Spain (€ 1bn)	— 72% personal instalment loans, 17% Point of Sale, 8% credit cards, 3% others — 0.6% 90+ days past due

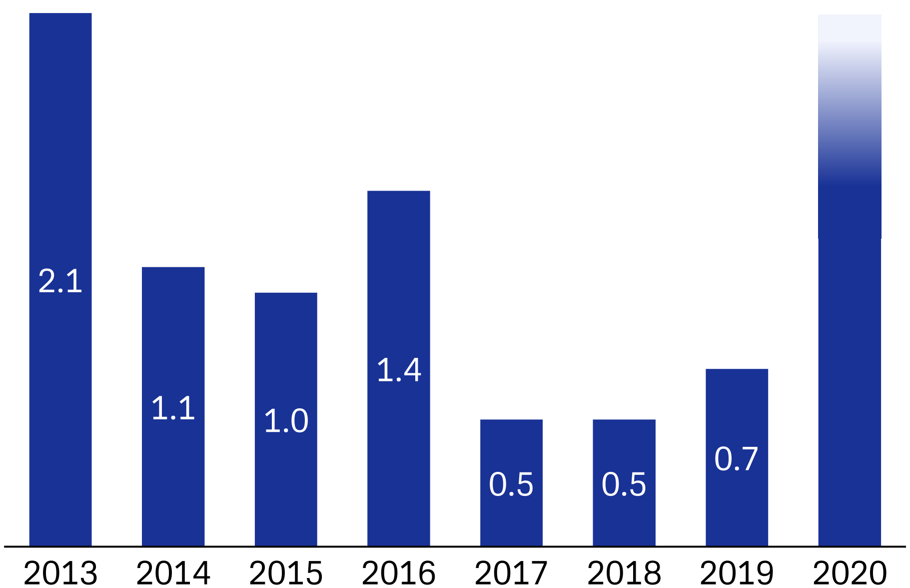
Consistently low levels of net credit loss provisions

Net Credit Loss Provisions

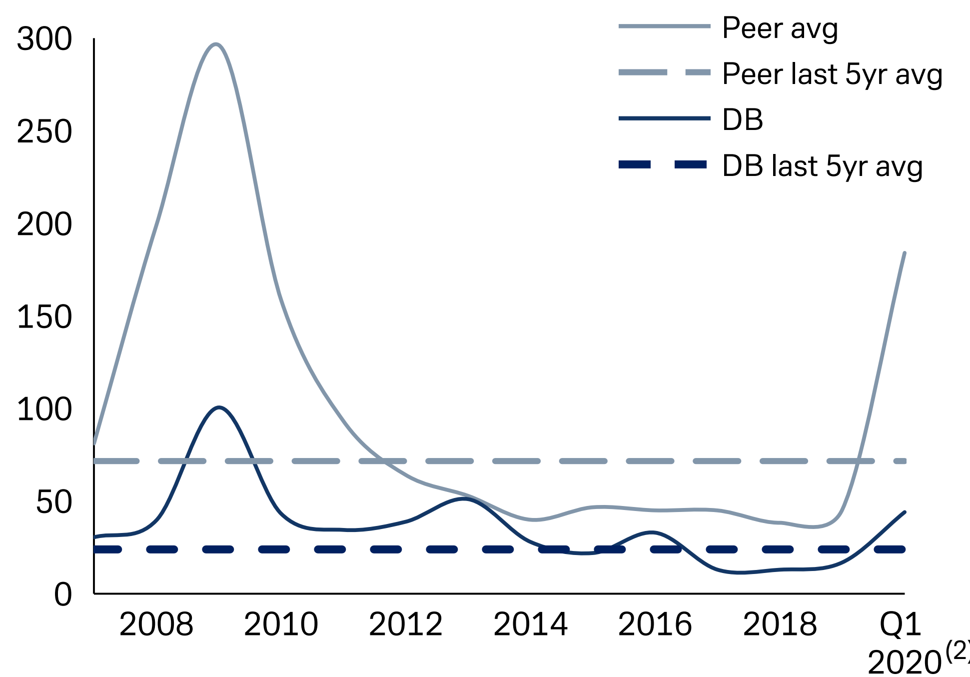
In bps

2013	2014	2015	2016	2017	2018	2019	2020
54	28	22	33	13	13	17	35-45

In € bn



Net Credit Loss Provision peer[1] comparison, in bps

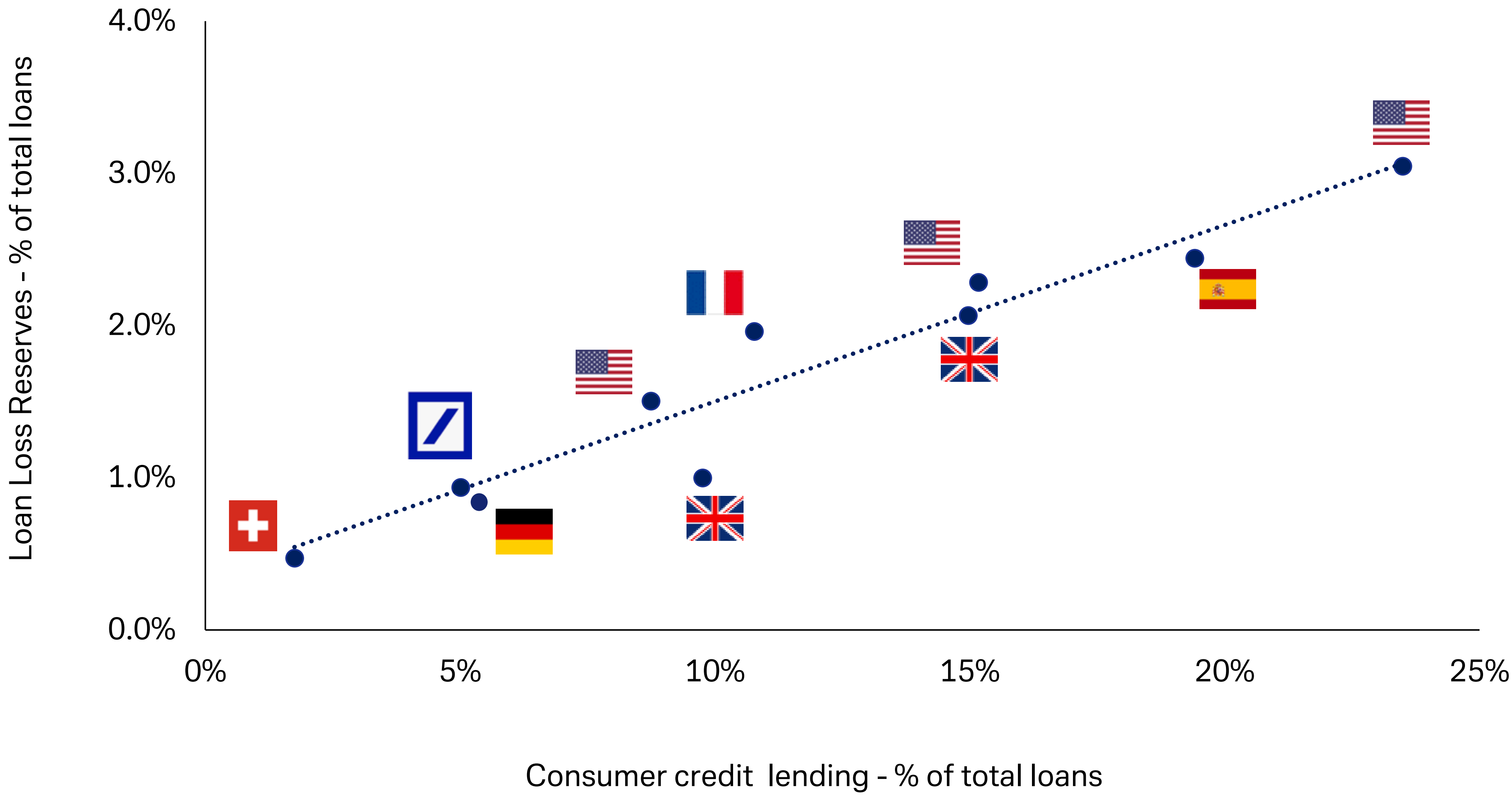


(1) Source: Company reports. Peers: Citigroup, Bank of America, JPMorgan, Barclays, BNP Paribas, UBS, Credit Suisse
(2) Q1 2020 net provision for credit losses annualized as % of loans at amortized cost

2018 EBA stress test not comparable to current environment

	2018 EBA stress test		Current environment
Macro	Continuous 3 year downturn with no recovery	≠	Severe shock with quicker recovery
	No Government support assumed		Significant Government support in place
Methodology	Overlays for credit provisions (~20bps) and conservative methodology	≠	Detailed, conservative internal bottom up analysis
	No mitigating actions allowed		Continued risk mitigation
Results	Retail main driver, >40% credit provision loss	≠	German fiscal response, low leverage
	DB well below peer average for credit impairment	=	Defensive positioning relative to peers

Loan loss reserves in-line with peers on a risk-adjusted basis



Source: Company reports

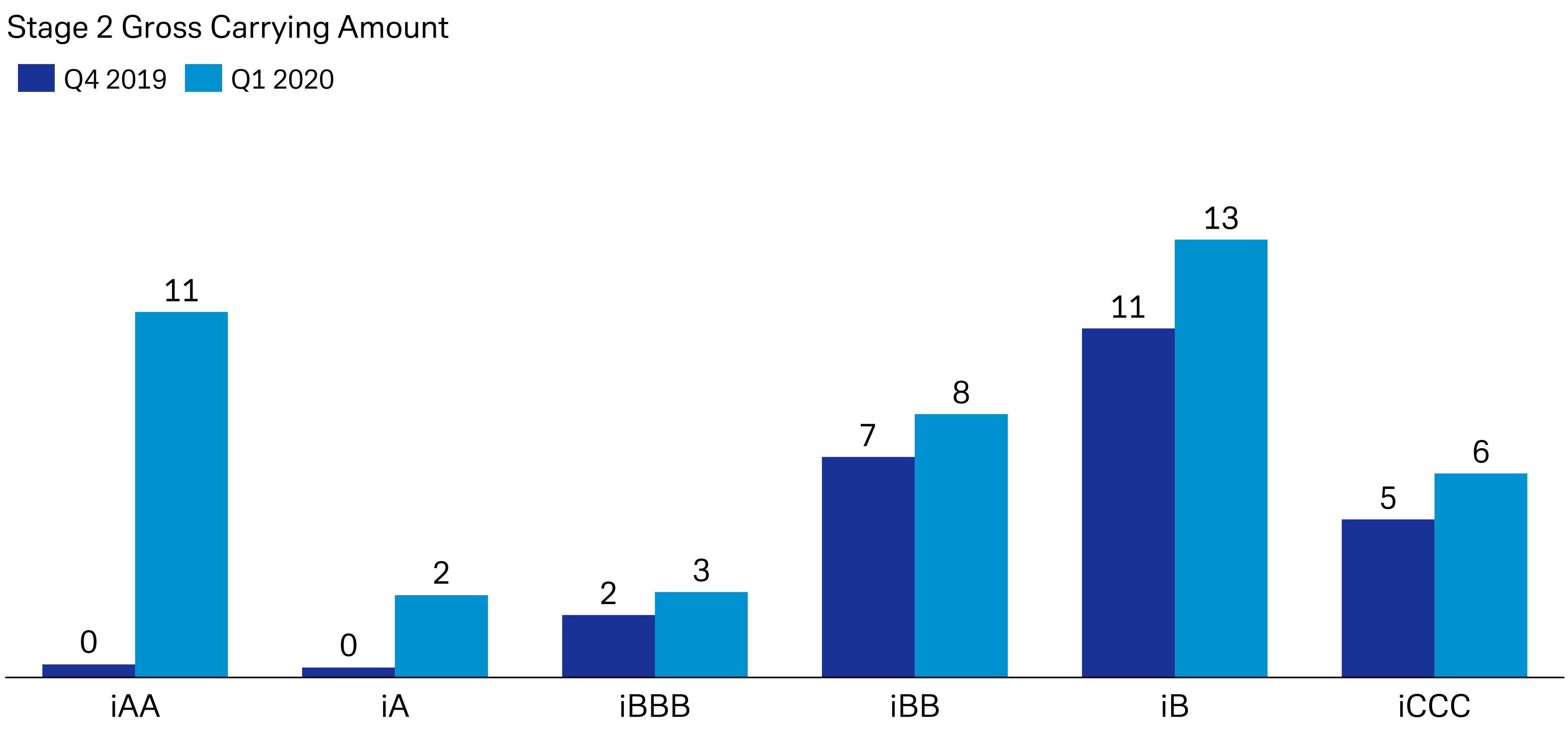
Accounting for Credit Loss Provisions (IFRS 9) Summary

Stage	Performance	Expected Credit Loss (ECL) calculation approach			Stage Movements Triggered By
Stage 1	Performing	1 year Expected Credit Loss	ECL Model		
Stage 2	Performing, but significantly deteriorated	Lifetime Expected Credit Loss	ECL Model		— Significant increase in lifetime probability of default / rating downgrade — Mandatory transfer to workout — Forbearance flag(2) — 30 days past due — Mandatory watchlist inclusion
Stage 3	Defaulted / non-performing	Lifetime Expected Credit Loss	Individual assessment	ECL Model(1)	— Unlikely to pay — 90 days past due

(1) Homogenous portfolios in the Private Bank
(2) Excluding forbearance measures related to COVID-19 only and concessions granted under private and public moratoria

Stage 2 asset[1] increase driven by low-risk clients

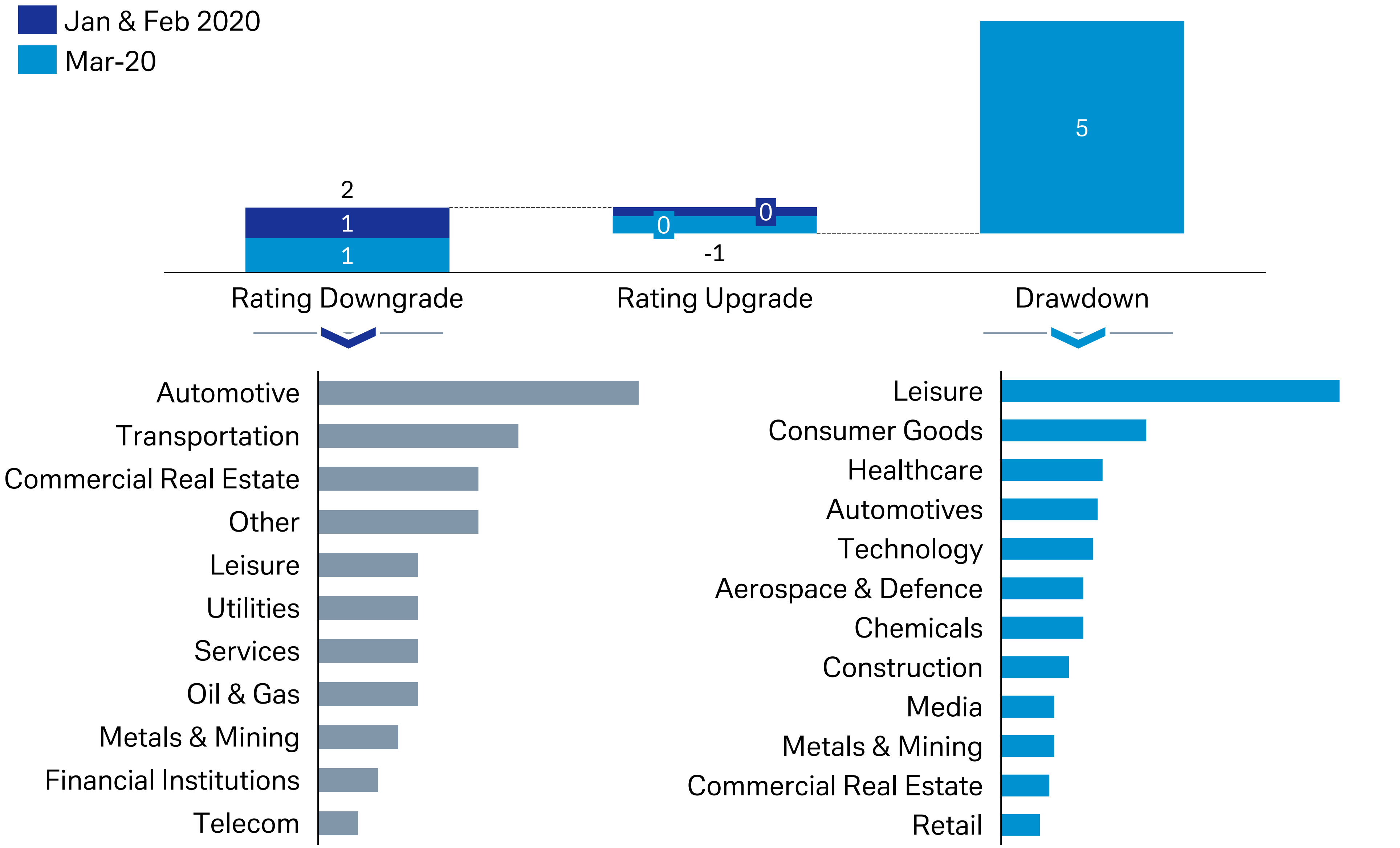
In € bn unless otherwise stated



(1) Q1 2020 Stage 2 assets include loans at amortized cost of € 31bn and other financial assets at amortized cost of € 13bn (mainly interest earning deposits and brokerage / cash margin). The € 19bn increase in Stage 2 assets in the quarter was driven by €7bn in loans at amortized cost and €12bn of other financial assets at amortized cost

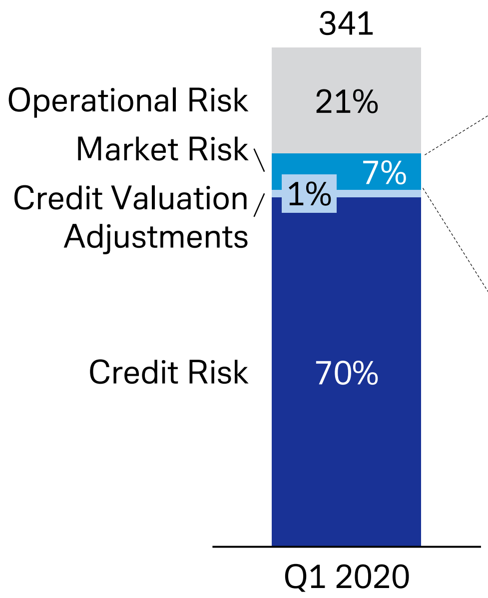
Limited impact on RWA from rating downgrades in Q1 2020

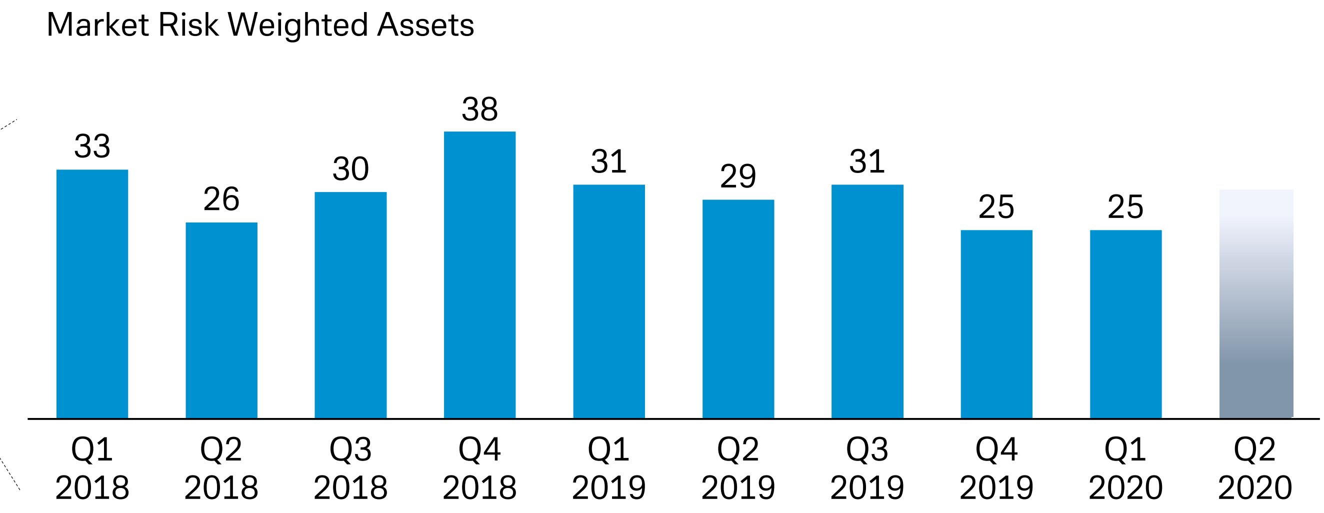
Risk weighted assets, in € bn

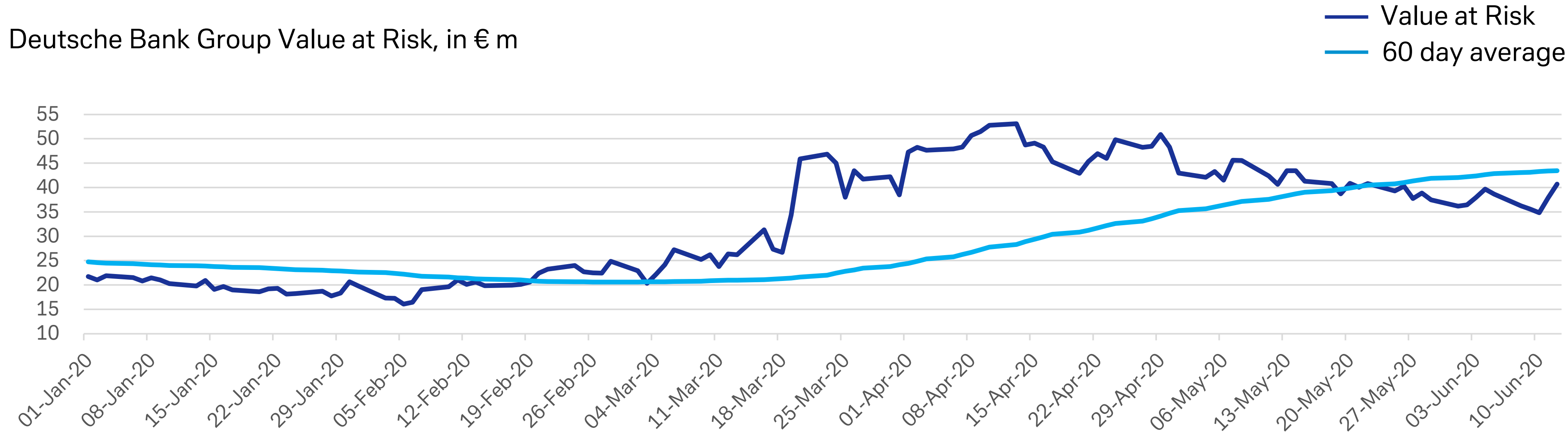


Volatility to drive higher Market RWA

In € bn





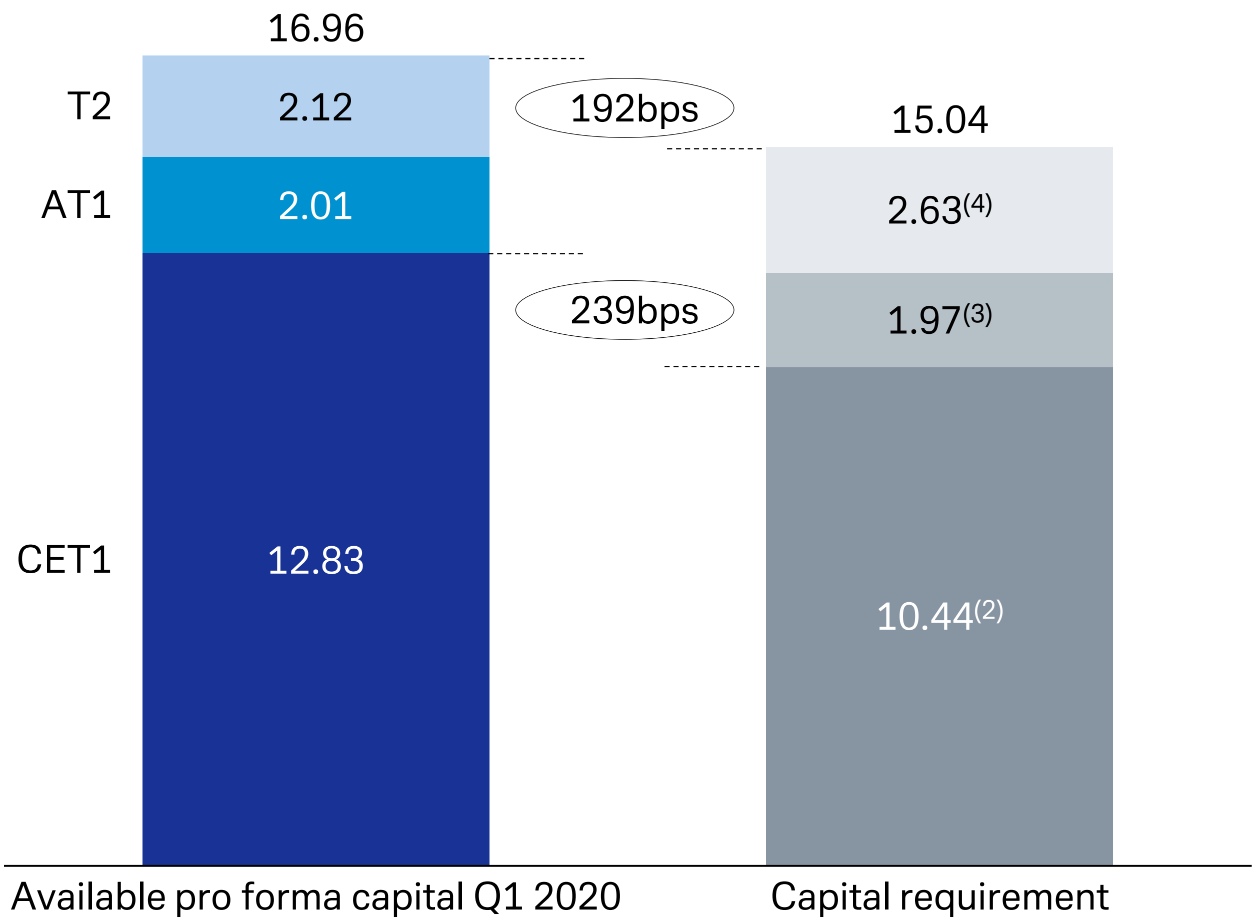


Strong capital position to weather the crisis

CET1 ratio drivers		Q1 2020: 12.8%
COVID-19 impacts	— COVID-19 related Credit Loss Provisions — Ratings migration impact on credit risk RWA — Committed facilities repayment / extension — Market risk weighted assets — Benefit from Prudential Valuation reserves	(~40) bps
Other	— Core Bank net income after AT1 coupon payments — Impact of transformation effects, including Capital Release Unit wind-down — Other items including deferred tax asset valuation adjustments and OCI	(~20) bps
Regulatory Changes	— EBA RTS on software assets — SME / infrastructure support factors — IFRS 9 transitional effect — EBA Guidelines on Definition of Default, Non-Performing Exposure backstop	~10 bps
		Q4 2020: ~12.3%

Improved distance to regulatory capital requirements

In %, as of 31 March 2020, phase-in view, pro forma reflecting recent Tier 2 issuance[1]



Note: Figures might not add up due to rounding

(1) Pro-forma number reflects a 37bps total capital ratio impact from the Tier 2 issuance in May 2020. Reported Tier 2 bucket in Q1 was 1.75%, total capital ratio 16.59%.

(2) CET 1 requirement comprises Pillar 1 requirement (4.50%), Pillar 2 requirement (1.41%), capital conservation buffer (2.50%), G-SIB buffer (2.00%) and countercyclical capital buffer (0.04%)

(3) Tier 1 requirement includes higher Pillar 1 requirement (6.00%) and Pillar 2 requirement (1.88%) compared to CET1 requirement

(4) Total capital requirement includes higher Pillar 1 requirement (8.00%) and Pillar 2 requirement (2.50%) compared to Tier 1 requirement

Key conclusions

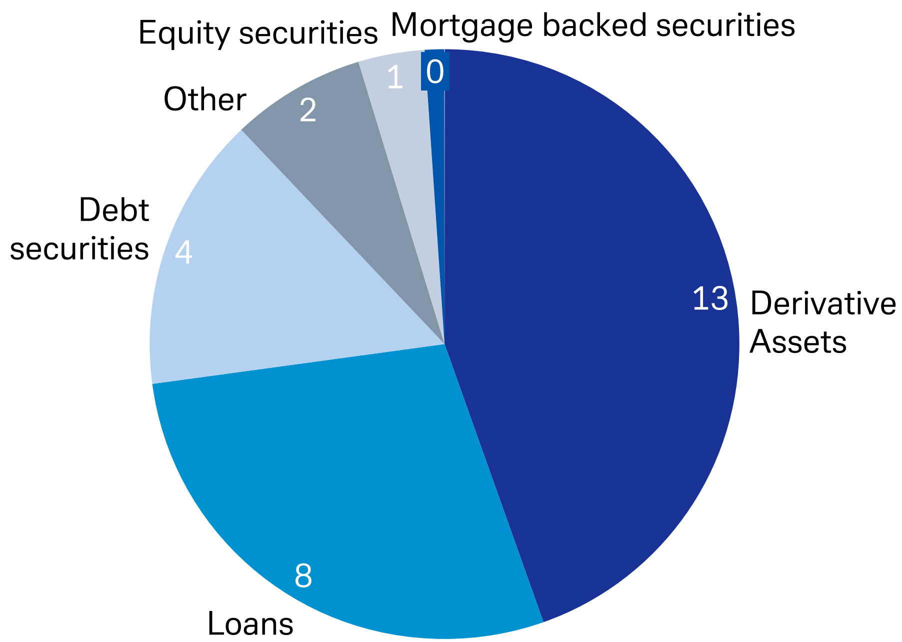
- Germany, our home market, is a source of strength
- Robust controls continue to demonstrate their effectiveness
- Tightly managed credit risk across portfolios
- In-depth review of most affected portfolios indicates manageable downside, validated by internal stress testing
- Capital buffers more than sufficient to withstand unexpected losses

Appendix

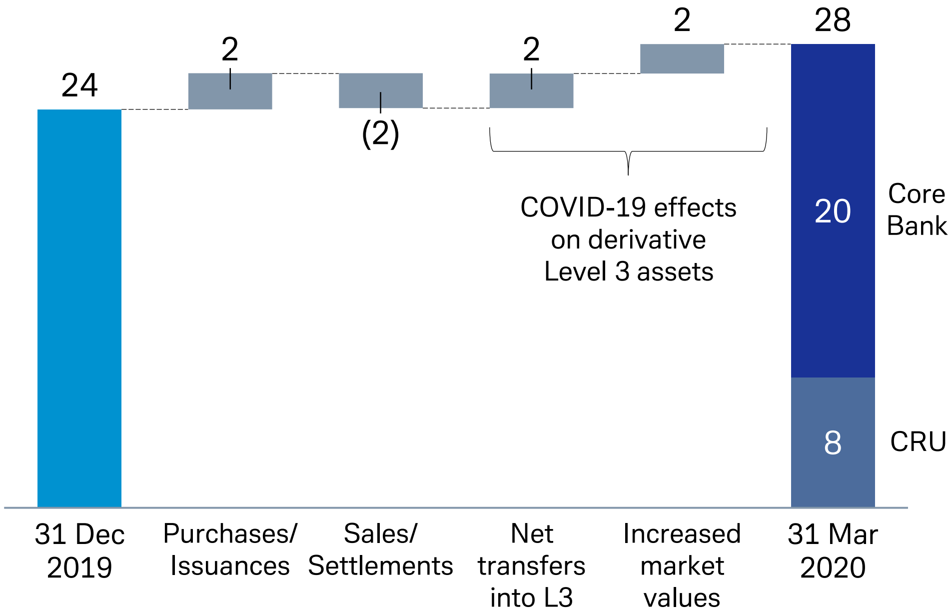
Deutsche Bank

Level 3 Assets: Diversified portfolio

Total assets: € 28bn



Movements in balances



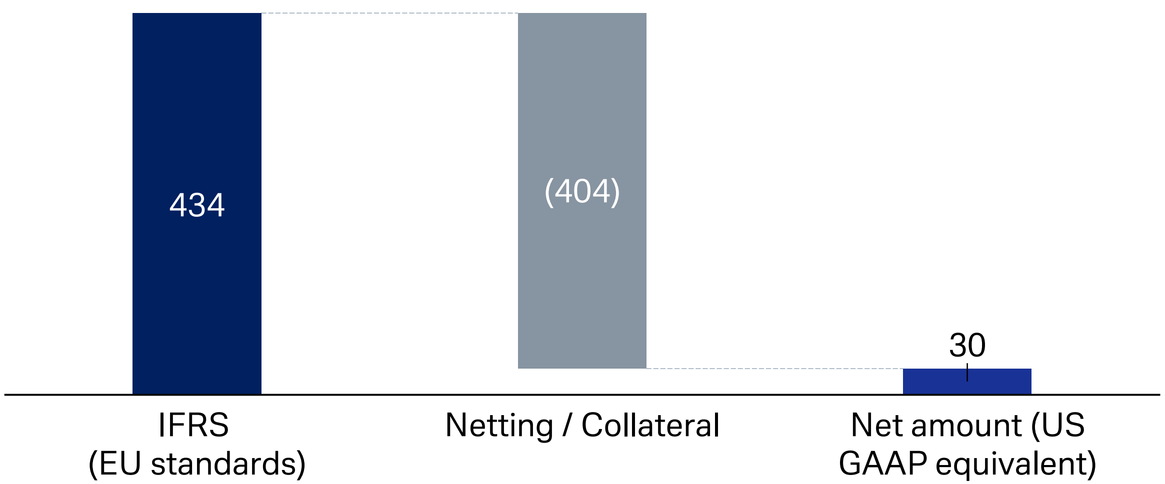
— EU banks tend to report higher Level 3 assets than US peers, reflecting smaller and fewer listed counterparties making inputs unobservable

— Level 3 assets in the Core Bank amount to 40% of Tangible Book Value, or 32% excluding temporary COVID-19 impacts

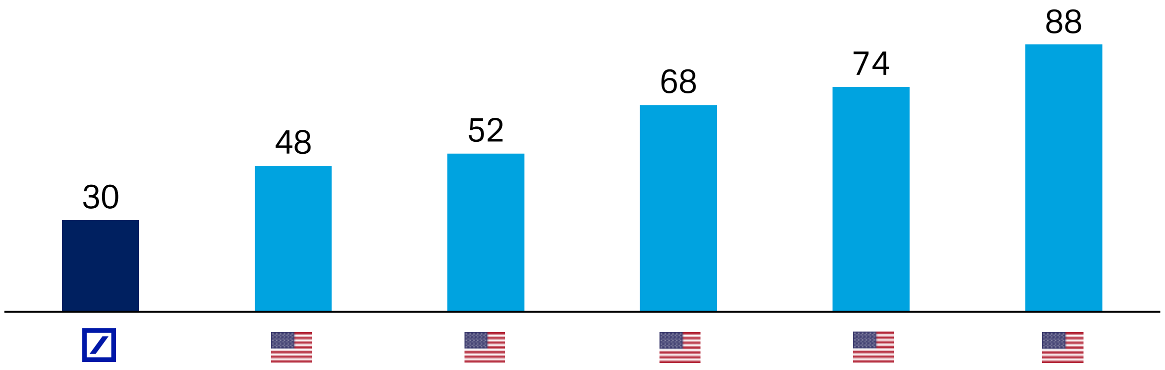
Derivatives exposure risk materially smaller than headline

Q1 2020, in € bn

EU accounting standards inflate disclosed derivative assets



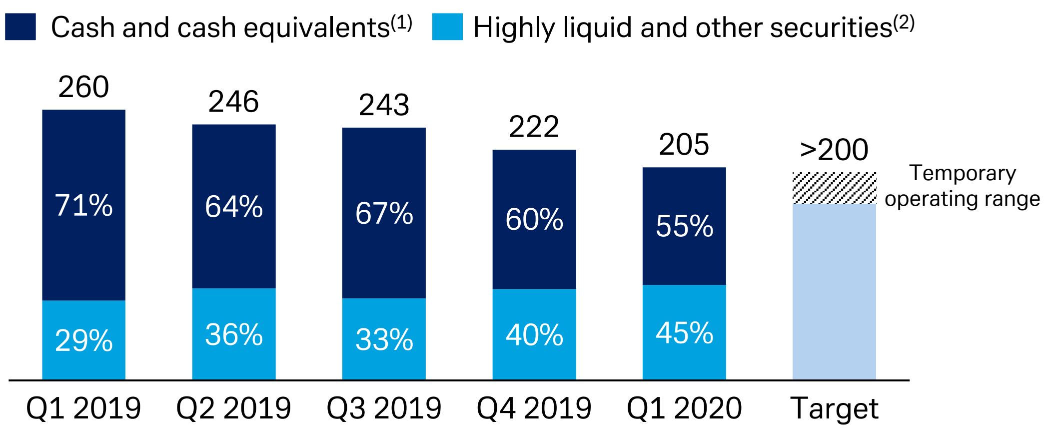
Net derivative assets are a function of market share



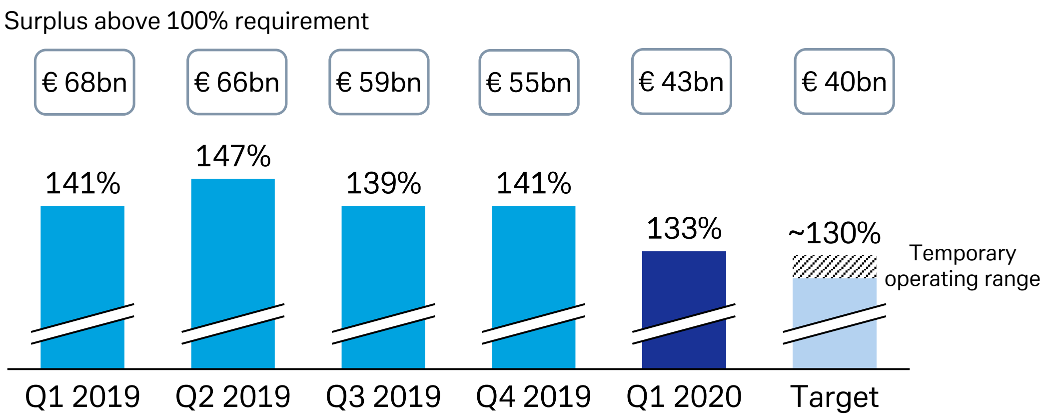
Source: Company reports

Liquidity risk: Sound liquidity profile maintained

Liquidity Reserves, € bn



Liquidity Coverage Ratio[3]



— Reduced excess Liquidity Reserves and Liquidity Coverage Ratio (LCR), mainly reflecting € 18bn of drawdowns on committed credit facilities in March as we support clients

— LCR remains comfortably above regulatory requirements

— Liquidity impact has been materially lower than our internal model scenarios

— Since quarter-end, we have seen drawdowns materially slow down, including observing net repayments in key businesses

(1) Held primarily at Central Banks
(2) Includes government, government guaranteed, and agency securities as well as other Central Bank eligible securities
(3) Liquidity Coverage Ratio based upon European Banking Authority (EBA) Delegated Act

Speaker biography

Stuart Wilson Lewis became a member of our Management Board on June 1, 2012 and is our Chief Risk Officer. On July 7, 2019 he assumed responsibility for Compliance, Anti-Financial Crime and the Business Selection and Conflicts Office.

He joined Deutsche Bank in 1996. Prior to assuming his current role, Stuart Lewis was the Deputy Chief Risk Officer and Chief Risk Officer of the Corporate & Investment Bank from 2010 to 2012. Between 2006 and 2010 he was Chief Credit Officer. Before joining Deutsche Bank in 1996, he worked at Credit Suisse and Continental Illinois National Bank in London.

Stuart Lewis studied at the University of Dundee, where he obtained an LLB (Hons), and he holds an LLM from the London School of Economics. He also attended the College of Law, Guildford.

Speaker biography

James von Moltke has been Chief Financial Officer and Member of the Management Board of Deutsche Bank AG since July 2017.

Prior to joining Deutsche Bank, he was Treasurer of Citigroup. In this capacity he was responsible for capital and funding as well as liquidity and interest rate risk, and played a significant role in Citigroup's restructuring following the global financial crisis. He worked at Morgan Stanley, where he led the Financial Technology Advisory team, and spent ten years at J.P. Morgan working in New York and Hong Kong.

Born in Heidelberg, he is a dual citizen of Germany and Australia and received a Bachelor of Arts degree from New College, Oxford.

Cautionary statements

Non-IFRS Financial Measures

This document contains non-IFRS financial measures. For a reconciliation to directly comparable figures under IFRS, to the extent not provided herein, please refer to the Financial Data Supplement which can be downloaded from www.db.com/ir.

Forward-Looking Statements

This document contains forward-looking statements. Forward-looking statements are statements that are not historical facts; they include statements about our beliefs and expectations and the assumptions underlying them. These statements are based on plans, estimates and projections as they are currently available to the management of Deutsche Bank. Forward-looking statements therefore speak only as of the date they are made, and we undertake no obligation to update publicly any of them in light of new information or future events.

By their very nature, forward-looking statements involve risks and uncertainties. A number of important factors could therefore cause actual results to differ materially from those contained in any forward-looking statement. Such factors include the conditions in the financial markets in Germany, in Europe, in the United States and elsewhere from which we derive a substantial portion of our revenues and in which we hold a substantial portion of our assets, the development of asset prices and market volatility, potential defaults of borrowers or trading counterparties, the implementation of our strategic initiatives, the reliability of our risk management policies, procedures and methods, and other risks referenced in our filings with the U.S. Securities and Exchange Commission. Such factors are described in detail in our SEC Form 20-F of 20 March 2020 under the heading “Risk Factors”. Copies of this document are readily available upon request or can be downloaded from www.db.com/ir.