



FCF Bank Monitor

Q2 2023



THE FINANCING SPECIALIST



EXECUTIVE SUMMARY

Executive Summary

The FCF Bank Monitor is a standardized report on Credit Default Swap spreads, ratings and the fundamental performance of German and foreign banks, most active in the German and Austrian midcap market and is a reference for investors, corporates and professionals

More advanced, detailed and / or customized reports are available upon request

FCF Bank Monitor

is a comprehensive quarterly analysis of the historic and current spreads of Credit Default Swaps (CDS), ratings (“Market View”) and fundamental performance indicators (“Fundamental View”) for banks most active in the German and Austrian corporate lending market. The analysis provides the short-term, medium-term and long-term market view on such banks’ credit default risks and is an indicator for banks’ (re-)financing costs in the capital markets. The rating and fundamental performance analysis provides an indication of the solidity and “pedigree” of the banks as lending partners

Selection of Financial Institutions

The selection of financial institutions is based on FCF’s financing expertise in the German midcap market and includes the most relevant institutions with respect to deal volumes of up to EUR 500m

- Only institutions with actively traded CDS instruments are included, and thus, several relevant regional banks are excluded (e.g. BTV, Oberbank, RLBOÖ, Sparkassen)
- Further, public institutions as KfW and the European Investment Bank (EIB) were not considered in the analyses

Customized Information

More advanced, detailed and / or customized reports can be ordered individually, offering subscribers the possibility to customize the following criteria (among others):

- Inclusion of international / US institutions
- Selection / deselection of specific institutions
- Specific solvency analysis (equity or debt analysis)
- Monthly updates

Recipients

The FCF Bank Monitor targets the following audience:

- Financial Institutions
- Investors
- Corporates with existing bank financings and with further financing needs

Availability

The FCF Bank Monitor is available on FCF’s website at 'www.fcf.de'

Data

All input data is provided by S&P Capital IQ and is not independently verified by FCF. Ratio and multiple calculations are driven based on the input data available. For additional information and disclaimer, please refer to the last page

To recommend colleagues to be added to the mailing list, kindly send an email with the respective contact information

If you have questions, comments or ideas, please do not hesitate to contact us. Supporting information on CDS spreads can be found in the Appendix

FCF OVERVIEW



FCF seeks to provide its clients with financing solutions

- (i) at the lowest cost,
- (ii) with the highest flexibility,
- (iii) in the shortest period of time,
- (iv) with the highest closing probability, and with
- (v) financing partners that integrate well into their strategy

Who We Are

- Specialized Investment Bank and Financing Specialist
- Advising public and private small- / midcap companies
- Advisor for structuring and placement of financing transactions:
 - All instruments: Unbiased approach to all available corporate financing instruments (no product selling approach), allowing for customized financing structures
 - All investors: Close and trusted relationships with senior executives of virtually all relevant equity and debt investors
 - Fast process: Process management skills and direct / personal access to institutional debt and equity investors enable fast transactions
- More than 150 transactions with a total placement volume in excess of EUR 5.0 billion since foundation in 2005
- More than 15 professionals headquartered in Munich

Capital Markets Capabilities and Services

| | | | |
|---------------|--------------------------|---|--|
| Equity | Private / Pre-IPO | <ul style="list-style-type: none"> ■ Venture capital ■ Growth capital | <ul style="list-style-type: none"> ■ Private equity |
| | Public | <ul style="list-style-type: none"> ■ Initial Public Offering (IPO) / Capital increase ■ Dual-track (IPO and alternative transaction) | <ul style="list-style-type: none"> ■ pursued in tandem ■ Private investment in Public Equity (PIPE) ■ Block trade |
| Debt | Short-term Debt | <ul style="list-style-type: none"> ■ Receivables / Factoring / Asset-backed securities ■ Borrowing base / Inventory | <ul style="list-style-type: none"> ■ Working capital / Revolving credit facility ■ Guarantees / Letter of credit |
| | Long-term Debt | <ul style="list-style-type: none"> ■ Bank loan facility / Syndicated loans ■ Sale-and-lease-back / Leasing ■ Corporate bonds (public / private placement) ■ High yield / PIK bond | <ul style="list-style-type: none"> ■ Promissory note (<i>Schuldscheindarlehen</i>) ■ Second lien / Subordinated loans ■ Venture debt ■ Unitranches |
| | Hybrid | <ul style="list-style-type: none"> ■ Mezzanine capital | <ul style="list-style-type: none"> ■ Convertible bonds |

Selected Transactions

| | | | | | | | | | | | |
|--|--|--|---|--|---|---|---|---|---|---|--|
| Debt Facility JORA Holding GmbH & Co. KG ~ EUR 30m June 2023 | Acquisition Loan KKA Management GmbH EUR 20m May 2023 | Capital Increase aerofoils GmbH [confidential] March 2023 | M&A (Sell-Side) Energieinsel [confidential] March 2023 | M&A (Sell-Side) PMG Projekttraum Management GmbH [confidential] March 2023 | M&A (Sell-Side) SER / RUZ Group [confidential] February 2023 | European Investment Bank Debt Facility German Bionic Systems GmbH EUR 15m December 2022 | Financial Advisory Mitteldeutsche Flughafen AG [confidential] December 2022 | Syndicated Loan ante Holding GmbH & Co. KG [confidential] December 2022 | Working Capital Facility CHO-Time Group EUR 7m November 2022 | Software-Leasing Facility Leading Global Device-as-a-Service Company EUR 10m October 2022 | Interest Rate Hedging Mitteldeutsche Flughafen AG EUR 150m October 2022 |
| European Investment Bank Debt Facility Evum Motors GmbH > EUR 12m September 2022 | Factoring Facility JORA Holding GmbH & Co. KG EUR 25m September 2022 | Equity Transaction - Joint Venture with Family Office Doppstadt Group > EUR 50m September 2022 | Acquisition Loan and Working Capital Facility Bencis > EUR 20m May 2022 | Acquisition Loan Facility Lloyd Fonds AG [confidential] April 2022 | European Investment Bank Debt Facility numares AG EUR 20m February 2022 | Syndicated Loan Schnellecke Logistics SE EUR 70m December 2021 | Syndicated Loan KWD Automotive AG & Co. KG EUR 70m December 2021 | Syndicated Loan Top 25 Pharmaceutical Company EUR 80m November 2021 | Syndicated Loan, Factoring, Real Estate Sale & Lease-Back Top 10 German Food Company EUR 85m October 2021 | Venture Financing Precisis AG EUR 20m September 2021 | Syndicated Loan Ziegler Holzindustrie GmbH & Co. KG EUR 230m August 2021 |



1

financing advisor in Germany, purely focusing on corporate financing transactions



More than
15

investment banking professionals



More than
100

years of aggregated, investment banking / financing experience



More than
150

completed transactions



More than
5 bn

total volume of advised & closed transactions since 2005



Network

access to more than 4000 international financial institutions



2000

contacts to family offices and ultra-high-net-worth individuals worldwide



More than
25

international conferences organized



More than
150

articles and research papers published



Leading

advisor for financing transactions with EIB in the DACH region

KEY FINDINGS



Key Findings

The FCF Bank Monitor highlights the key developments of German and foreign banks most active in the German and Austrian mid-cap financing market

The FCF Bank Monitor outlines several key factors that should be considered when selecting banks during a (re)financing of existing financial liabilities

Key Findings (2Q23)

Macro findings

- In 2Q23, CDS spreads of most banks trended downwards from the recent 1Q23 highs following the collapse of SVB, Signature Bank and Credit Suisse. Emergency central bank liquidity backstops and less aggressive tightening of monetary policy have helped ease investor concerns regarding liquidity and solvency of financial institutions
- Mean CDS spreads of 79.5 bps (German and Foreign Institutions) are almost two times higher compared to 2021 levels (42.9 bps; all-time low levels) and match levels last seen in 2018
- The FCF ranking of German and foreign banks operating in the German and Austrian midcap segments, based on CDS spreads across 1-, 5- and 10-year terms, major credit ratings and key fundamental performance criteria gives an indication about the banks' expected future stability and crisis resistance:
 - Bayern LB (score: 106.8) heads the league table followed by LBBW (score: 90.8) and Helaba (score: 85.7)
 - Deutsche Bank (score: 31.3) completes the league table ranking behind NORD/LB (score: 40.7) and Commerzbank (score: 45.2)
- The variation in CDS spreads and ratings highlights the differences in actual and expected bank stability, important considerations when selecting an institution as a lending bank (“Hausbank”) or transaction counterparty:
 - Across 1-year CDS spreads, the lowest CDS spread lies at 17.0 bps (ING) whilst the highest spread lies at 98.5 bps (RBI), 5.8x higher
 - Across 5-year CDS spreads, the lowest CDS spread lies at 42.2 bps (DZ Bank) whilst the highest spread lies at 194.2 bps (RBI), 4.6x higher
 - Across 10-year CDS spreads, the lowest CDS spread lies at 54.4 bps (DZ Bank) whilst the highest spread lies at 225.0 bps (RBI), 4.1x higher
 - Across S&P ratings, the highest rating is AA- (Helaba, LBBW and Bayern LB) whilst the lowest rating is BBB (UniCredit)
- The relationship between backward- and forward-looking indicators has weakened further over the last quarter whereby the correlation & explanatory power decreased to R² of 31%. RBI and HCOB are the largest outliers in 2Q23, suggesting these institutions show a higher probability of a future rating downgrade (displaying higher CDS spreads than their current rating would indicate)

Individual bank findings

- The Austrian RBI shows the highest CDS spreads in 2Q23 as investors continue to evaluate the full impact of the ongoing sale / spin-off of its highly profitable Russia business (in '22 nearly 50% of RBI profit was generated from its Russian operations)
- Despite solid fundamentals, HCOB shows very high CDS spreads in 2Q23, reflecting overall investor caution in relation to higher perceived risk, asset-based lending activities (especially commercial real estate and shipping finance)

Combined Ranking Overview (Market & Fundamental)

Q2 2023

FCF allocated scores of 1 (low) to 22 (high) to the 22 banks, based on the **Market View** (CDS spread & volatility, public credit rating) and the **Fundamental View** (profitability, equity, liquidity and non-performing loan ratios)

The combination of both single scores results in a **Combined View**, giving an indication on the banks' expected future stability, crisis resistance and overall wholesale funding costs – across maturities, rating agencies and fundamental criteria

Bayern LB (score 106.8) heads the league table, whereas Deutsche Bank ranks 22nd (31.3)

| Rank | Trend | Bank | Country | Market View | | | | Market View Score | Fundamental View | | | | | | Fundamental View Score | Combined Total Score | Delta vs Market View |
|------|-------|-------------------------------|---------|--------------|--------------|---------------|--------------|-------------------|------------------|-----|------------|-------|-----------|-----|------------------------|----------------------|----------------------|
| | | | | CDS 1Y Score | CDS 5Y Score | CDS 10Y Score | Rating Score | | RoE | RoA | Tier 1 Cap | % NPL | Cost Eff. | LCR | | | |
| 1 | ↗ | Bayern LB | | 21 | 20 | 18 | 20 | 59.3 | 10 | 11 | 18 | 20 | 14 | 22 | 47.5 | 106.8 | 0 |
| 2 | ↘ | LB BW | | 15 | 19 | 20 | 20 | 55.3 | 16 | 13 | 9 | 22 | 8 | 3 | 35.5 | 90.8 | 1 |
| 3 | ↗ | Helaba | | 19 | 18 | 18 | 20 | 55.7 | 5 | 5 | 5 | 19 | 6 | 20 | 30.0 | 85.7 | -1 |
| 4 | ↘ | ING | | 22 | 22 | 22 | 12 | 55.3 | 11 | 10 | 7 | 13 | 11 | 8 | 30.0 | 85.3 | -1 |
| 5 | → | Santander | | 18 | 14 | 13 | 12 | 42.0 | 17 | 15 | 3 | 2 | 19 | 17 | 36.5 | 78.5 | 2 |
| 6 | ↗ | CRÉDIT AGRICOLE | | 20 | 18 | 18 | 12 | 49.3 | 13 | 6 | 1 | 7 | 12 | 14 | 26.5 | 75.8 | 0 |
| 7 | ↘ | DZ BANK | | 17 | 21 | 21 | 12 | 51.0 | 3 | 2 | 8 | 17 | 5 | 13 | 24.0 | 75.0 | -2 |
| 8 | ↘ | ABN-AMRO | | 10 | 15 | 16 | 8 | 35.0 | 14 | 14 | 15 | 14 | 4 | 12 | 36.5 | 71.5 | 1 |
| 9 | ↗ | J.P.Morgan | | 12 | 13 | 13 | 2 | 27.3 | 21 | 20 | 10 | 21 | 13 | 2 | 43.5 | 70.8 | 5 |
| 10 | ↘ | 中國銀行 BANK OF CHINA | | 15 | 8 | 6 | 12 | 30.7 | 15 | 17 | 4 | 16 | 22 | 6 | 40.0 | 70.7 | 2 |
| 11 | ↗ | Crédit Mutuel | | 9 | 11 | 11 | 12 | 32.3 | 7 | 9 | 20 | 3 | 16 | 16 | 35.5 | 67.8 | -1 |
| 12 | ↘ | ERSTE Group | | 5 | 6 | 6 | 12 | 23.0 | 18 | 18 | 12 | 11 | 17 | 11 | 43.5 | 66.5 | 3 |
| 13 | ↘ | BNP PARIBAS | | 13 | 16 | 16 | 12 | 42.0 | 8 | 8 | 11 | 8 | 7 | 5 | 23.5 | 65.5 | -6 |
| 14 | → | HSBC | | 14 | 10 | 7 | 2 | 22.0 | 19 | 16 | 17 | 12 | 15 | 4 | 41.5 | 63.5 | 2 |
| 15 | ↗ | UniCredit | | 6 | 5 | 5 | 1 | 11.0 | 20 | 19 | 21 | 5 | 18 | 17 | 50.0 | 61.0 | 4 |
| 16 | ↘ | Raiffeisen Bank International | | 2 | 1 | 1 | 2 | 4.7 | 22 | 22 | 19 | 6 | 21 | 21 | 55.5 | 60.2 | 6 |
| 17 | ↗ | Hamburg Commercial Bank | | 2 | 2 | 2 | 2 | 6.0 | 12 | 21 | 22 | 10 | 20 | 19 | 52.0 | 58.0 | 4 |
| 18 | → | SOCIETE GENERALE | | 9 | 11 | 11 | 8 | 28.0 | 2 | 4 | 15 | 1 | 9 | 10 | 20.5 | 48.5 | -5 |
| 19 | ↘ | NATIXIS BEYOND BANKING | | 12 | 12 | 13 | 8 | 32.3 | 4 | 3 | 2 | 15 | 2 | 1 | 13.5 | 45.8 | -9 |
| 20 | → | COMMERZBANK | | 8 | 8 | 9 | 2 | 17.7 | 6 | 7 | 14 | 9 | 10 | 9 | 27.5 | 45.2 | -2 |
| 21 | → | NORD/LB | | 4 | 6 | 8 | 8 | 19.7 | 1 | 1 | 6 | 18 | 1 | 15 | 21.0 | 40.7 | -4 |
| 22 | → | Deutsche Bank | | 2 | 3 | 3 | 2 | 7.3 | 9 | 12 | 13 | 4 | 3 | 7 | 24.0 | 31.3 | -2 |

Combined Ranking Overview (Market & Fundamental)

LTM Development

The German Bayern LB secures the top of the league table for the first time over the last year ahead of LBBW and ING Bank, who led the table in previous quarters

The German Helaba recovers from a large rank drop in 4Q22 and 1Q23, advancing seven places to rank 3 in 2Q23

The Austrian Erste Bank experiences the largest decline by nine places from rank 3 in the previous quarter to rank 12 in 2Q23

The Italian UniCredit continues its upward trajectory seen over the last year, improving from rank 21 in 3Q22 to 15 in the last quarter

| Q3 2022 | Q4 2022 | Q1 2023 | Q2 2023 |
|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| 1. ING | 1. ING | 1. LB BW | 1. Bayern LB |
| 2. Bayern LB | 2. Bayern LB | 2. ING | 2. LB BW |
| 3. DZ BANK | 3. LB BW | 3. ERSTE Group | 3. Helaba |
| 4. LB BW | 4. DZ BANK | 4. Bayern LB | 4. ING |
| 5. Helaba | 5. CRÉDIT AGRICOLE | 5. DZ BANK | 5. Santander |
| 6. CRÉDIT AGRICOLE | 6. ERSTE Group | 6. Santander | 6. CRÉDIT AGRICOLE |
| 7. ERSTE Group | 7. ABN-AMRO | 7. ABN-AMRO | 7. DZ BANK |
| 8. Santander | 8. Helaba | 8. CRÉDIT AGRICOLE | 8. ABN-AMRO |
| 9. Crédit Mutuel | 9. Crédit Mutuel | 9. 中國銀行 BANK OF CHINA | 9. J.P.Morgan |
| 10. 中國銀行 BANK OF CHINA | 10. Santander | 10. Helaba | 10. 中國銀行 BANK OF CHINA |
| 11. J.P.Morgan | 11. 中國銀行 BANK OF CHINA | 11. J.P.Morgan | 11. Crédit Mutuel |
| 12. ABN-AMRO | 12. J.P.Morgan | 12. BNP PARIBAS | 12. ERSTE Group |
| 13. BNP PARIBAS | 13. BNP PARIBAS | 13. Crédit Mutuel | 13. BNP PARIBAS |
| 14. HSBC | 14. Raiffeisen Bank International | 14. HSBC | 14. HSBC |
| 15. Hamburg Commercial Bank | 15. HSBC | 15. Raiffeisen Bank International | 15. UniCredit |
| 16. NATIXIS BEYOND BANKING | 16. Hamburg Commercial Bank | 16. UniCredit | 16. Raiffeisen Bank International |
| 17. Raiffeisen Bank International | 17. NATIXIS BEYOND BANKING | 17. NATIXIS BEYOND BANKING | 17. Hamburg Commercial Bank |
| 18. SOCIETE GENERALE | 18. SOCIETE GENERALE | 18. SOCIETE GENERALE | 18. SOCIETE GENERALE |
| 19. NORD/LB | 19. UniCredit | 19. Hamburg Commercial Bank | 19. NATIXIS BEYOND BANKING |
| 20. COMMERZBANK | 20. COMMERZBANK | 20. COMMERZBANK | 20. COMMERZBANK |
| 21. UniCredit | 21. NORD/LB | 21. NORD/LB | 21. NORD/LB |
| 22. Deutsche Bank | 22. Deutsche Bank | 22. Deutsche Bank | 22. Deutsche Bank |

5-YEAR CDS SPREADS



5-Year CDS Spreads

Overview & Historical Analysis

1 Over the last 3 years, CDS spreads have generally trended upwards. In 2Q23, CDS spreads of foreign & domestic banks trade at a mean of 79.5 bps

2 Since 2021, all banks showed a significant increase (e.g., deterioration) in CDS spreads, in particular driven by the Russian invasion into Ukraine and the ensuing sanctions, high inflation and increased economic uncertainty

| German Institutions | 1 10-Year Price Development (in bps) | | | | | | | | | | | 2 3-Year Changes (in %) | | | Volatility | Long-Term Ratings | | |
|---------------------|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------------------|---------|---------|------------|-------------------|---------|-------|
| | Dec-13 | Dec-14 | Dec-15 | Dec-16 | Dec-17 | Dec-18 | Dec-19 | Dec-20 | Dec-21 | Dec-22 | Jul-23 | Δ 20-23 | Δ 21-23 | Δ 22-23 | 90 Days | S&P | Moody's | Fitch |
| | Bayern LB | 101.0 | 77.2 | 75.8 | 68.6 | 32.9 | 38.3 | 35.3 | 64.4 | 37.4 | 57.2 | 50.0 | -22.4% | 33.7% | -12.5% | 2.7% | - | Aa3 |
| Commerzbank | 110.7 | 83.6 | 90.6 | 117.3 | 54.5 | 124.7 | 35.2 | 38.7 | 44.4 | 85.9 | 83.1 | 114.7% | 87.1% | -3.2% | 2.2% | A- | A2 | - |
| Deutsche Bank | 84.3 | 79.7 | 96.5 | 162.3 | 72.4 | 204.6 | 60.9 | 54.5 | 45.8 | 123.0 | 114.6 | 110.4% | 150.2% | -6.9% | 1.9% | A- | A1 | A |
| DZ Bank | 82.4 | 75.9 | 78.1 | 78.6 | 70.2 | 66.1 | 62.0 | 62.5 | 33.6 | 57.7 | 42.2 | -32.5% | 25.4% | -26.9% | 3.4% | A+ | A3 | AA- |
| Hamburg Commercial | 189.3 | 193.8 | 187.0 | 172.1 | 147.6 | 149.0 | 109.0 | 75.2 | 66.1 | 198.5 | 145.7 | 93.6% | 120.6% | -26.6% | 3.6% | - | A3 | - |
| Helaba | 67.2 | 58.3 | 58.2 | 52.3 | 46.2 | 46.9 | 42.3 | 56.0 | 39.7 | 67.3 | 47.7 | -14.8% | 20.2% | -29.1% | 3.8% | - | Aa3 | A+ |
| LBBW | 80.8 | 61.4 | 64.8 | 50.0 | 36.6 | 38.8 | 48.0 | 46.9 | 33.1 | 48.3 | 57.1 | 21.7% | 72.5% | 18.3% | 2.0% | - | Aa3 | A |
| NORD/LB | na | 104.6 | 114.1 | 115.8 | 72.8 | 93.5 | 67.2 | 95.1 | 69.2 | 109.0 | 93.9 | -1.3% | 35.8% | -13.8% | 2.7% | - | A3 | A |
| Min | 67.2 | 58.3 | 58.2 | 50.0 | 32.9 | 38.3 | 35.2 | 38.7 | 33.1 | 48.3 | 42.2 | -32.5% | 20.2% | -29.1% | 1.9% | - | - | - |
| Max | 189.3 | 193.8 | 187.0 | 172.1 | 147.6 | 204.6 | 109.0 | 95.1 | 69.2 | 198.5 | 145.7 | 114.7% | 150.2% | 18.3% | 3.8% | - | - | - |
| Median | 84.3 | 78.4 | 84.3 | 97.2 | 62.4 | 79.8 | 54.5 | 59.2 | 42.1 | 76.6 | 70.1 | 10.2% | 54.2% | -13.2% | 2.7% | - | - | - |
| Mean | 102.2 | 91.8 | 95.7 | 102.1 | 66.6 | 95.3 | 57.5 | 61.7 | 46.2 | 93.4 | 79.3 | 33.7% | 68.2% | -12.6% | 2.8% | - | - | - |

| Foreign Institutions | 1 10-Year Price Development (in bps) | | | | | | | | | | | 2 3-Year Changes (in %) | | | Volatility | Long-Term Ratings | | |
|----------------------|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------------------|---------|---------|------------|-------------------|---------|-------|
| | Dec-13 | Dec-14 | Dec-15 | Dec-16 | Dec-17 | Dec-18 | Dec-19 | Dec-20 | Dec-21 | Dec-22 | Jul-23 | Δ 20-23 | Δ 21-23 | Δ 22-23 | 90 Days | S&P | Moody's | Fitch |
| | ABN AMRO | 90.2 | 62.1 | 66.2 | 65.4 | 45.0 | 64.0 | 19.6 | 21.2 | 39.4 | 59.4 | 65.5 | 209.5% | 66.2% | 10.1% | 1.6% | A | A1 |
| Bank of China | 113.6 | 120.1 | 130.4 | 142.4 | 66.1 | 81.8 | 35.5 | 32.0 | 33.7 | 63.2 | 60.9 | 123.7% | 35.5% | -18.6% | 2.4% | A+ | Aa3 | A |
| BNP Paribas | 83.3 | 69.6 | 70.8 | 85.6 | 22.5 | 73.0 | 25.4 | 32.0 | 33.7 | 63.2 | 60.9 | 90.5% | 80.9% | -3.5% | 1.9% | A+ | Aa3 | AA- |
| Credit Agricole | 104.1 | 70.3 | 70.6 | 73.7 | 19.8 | 65.0 | 23.1 | 27.7 | 30.9 | 55.9 | 53.7 | 94.1% | 73.7% | -4.0% | 2.3% | A+ | Aa3 | A+ |
| Crédit Mutuel | 109.1 | 64.8 | 41.9 | 24.0 | 26.5 | 40.6 | 37.2 | 44.2 | 39.6 | 63.3 | 79.8 | 80.8% | 101.3% | 26.1% | 3.2% | A+ | Aa3 | AA- |
| Erste Group Bank | 116.8 | 159.3 | 123.2 | 127.7 | 47.3 | 52.8 | 47.5 | 42.6 | 39.6 | 62.5 | 102.1 | 139.6% | 157.8% | 63.4% | 3.2% | A+ | A2 | A |
| HSBC | 65.4 | 52.1 | 83.1 | 81.2 | 35.3 | 91.3 | 50.2 | 44.1 | 45.6 | 91.6 | 74.3 | 68.5% | 62.7% | -18.9% | 1.8% | A- | A3 | A+ |
| ING Bank | 81.2 | 54.8 | 52.4 | 64.4 | 16.9 | 39.1 | 19.6 | 21.4 | 23.8 | 44.4 | 45.2 | 111.6% | 89.8% | 1.7% | 1.6% | A+ | A1 | AA- |
| JP Morgan | 67.0 | 62.9 | 72.7 | 63.8 | 37.4 | 69.0 | 33.0 | 46.7 | 48.1 | 79.5 | 61.2 | 31.1% | 27.3% | -23.0% | 2.4% | A- | A1 | AA- |
| Natixis | 100.9 | 58.3 | 68.5 | 80.2 | 30.2 | 62.0 | 50.6 | 34.1 | 35.8 | 63.7 | 69.7 | 104.2% | 94.6% | 9.4% | 2.1% | A | A1 | A |
| RBI | 126.4 | 239.6 | 211.5 | 142.4 | 62.8 | 80.8 | 75.5 | 47.0 | 38.7 | 186.9 | 194.2 | 312.8% | 401.6% | 3.9% | 0.3% | A- | A2 | - |
| Santander | 123.2 | 79.6 | 139.7 | 119.3 | 31.8 | 74.9 | 27.9 | 35.3 | 37.8 | 67.9 | 64.4 | 82.6% | 70.5% | -5.2% | 1.6% | A+ | A2 | A |
| Societe Generale | 102.1 | 93.7 | 69.7 | 84.6 | 23.4 | 74.0 | 26.7 | 32.8 | 37.0 | 68.7 | 69.6 | 112.6% | 88.3% | 1.3% | 2.0% | A | A1 | A |
| UniCredit | 146.6 | 128.0 | 132.7 | 173.8 | 61.4 | 177.4 | 76.3 | 71.2 | 67.8 | 121.9 | 96.8 | 35.8% | 42.7% | -20.6% | 1.7% | BBB | Baa1 | BBB |
| Min | 65.4 | 52.1 | 41.9 | 24.0 | 16.9 | 39.1 | 19.6 | 21.2 | 23.8 | 44.4 | 45.2 | 31.1% | 27.3% | -23.0% | 0.3% | - | - | - |
| Max | 146.6 | 239.6 | 211.5 | 173.8 | 66.1 | 177.4 | 76.3 | 71.2 | 67.8 | 186.9 | 194.2 | 312.8% | 401.6% | 63.4% | 3.2% | - | - | - |
| Median | 103.1 | 69.9 | 71.7 | 82.9 | 33.6 | 71.0 | 34.3 | 34.8 | 39.1 | 65.8 | 69.7 | 99.1% | 77.3% | -1.1% | 2.0% | - | - | - |
| Mean | 102.1 | 93.9 | 95.2 | 94.9 | 37.6 | 74.7 | 39.2 | 38.2 | 41.0 | 80.2 | 79.6 | 114.1% | 99.5% | 1.6% | 2.0% | - | - | - |

| All Institutions | 1 10-Year Price Development (in bps) | | | | | | | | | | | 2 3-Year Changes (in %) | | | Volatility | Long-Term Ratings | | |
|------------------|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------------------|---------|---------|------------|-------------------|---------|-------|
| | Dec-13 | Dec-14 | Dec-15 | Dec-16 | Dec-17 | Dec-18 | Dec-19 | Dec-20 | Dec-21 | Dec-22 | Jul-23 | Δ 20-23 | Δ 21-23 | Δ 22-23 | 90 Days | S&P | Moody's | Fitch |
| | Min | 65.4 | 52.1 | 41.9 | 24.0 | 16.9 | 38.3 | 19.6 | 21.2 | 23.8 | 44.4 | 42.2 | -32.5% | 20.2% | -29.1% | 0.3% | - | - |
| Max | 189.3 | 239.6 | 211.5 | 173.8 | 147.6 | 204.6 | 109.0 | 95.1 | 69.2 | 198.5 | 194.2 | 312.8% | 401.6% | 63.4% | 3.8% | - | - | - |
| Median | 101.0 | 76.6 | 77.0 | 82.9 | 41.2 | 71.0 | 39.7 | 44.1 | 39.5 | 67.6 | 69.7 | 92.1% | 73.1% | -4.6% | 2.2% | - | - | - |
| Mean | 102.2 | 93.2 | 95.4 | 97.5 | 48.2 | 82.2 | 45.8 | 46.7 | 42.9 | 85.0 | 79.5 | 84.8% | 88.1% | -3.6% | 2.3% | - | - | - |

| 5-Year Govt. Interest Rates | 10-Year Price Development (in bps) | | | | | | | | | | | 3-Year Changes (in %) | | | Volatility | Long-Term Ratings | | |
|--------------------------------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------------|---------|---------|------------|-------------------|---------|-------|
| | Dec-13 | Dec-14 | Dec-15 | Dec-16 | Dec-17 | Dec-18 | Dec-19 | Dec-20 | Dec-21 | Dec-22 | Jul-23 | Δ 20-23 | Δ 21-23 | Δ 22-23 | 90 Days | S&P | Moody's | Fitch |
| EU Central Government Bond | 107.1 | 7.1 | 1.7 | -47.3 | -16.6 | -26.3 | -44.6 | -72.4 | -47.9 | 245.1 | 257.3 | 455.4% | 637.6% | 5.0% | 2.0% | AAA | Aaa | AAA |
| United Kingdom Government Debt | 204.2 | 113.1 | 125.6 | 48.0 | 72.0 | 90.7 | 60.6 | -11.2 | 73.1 | 366.3 | 500.2 | 4,566.1% | 584.3% | 36.6% | 1.5% | AA | Aa3 | AA- |

5-Year CDS Spreads

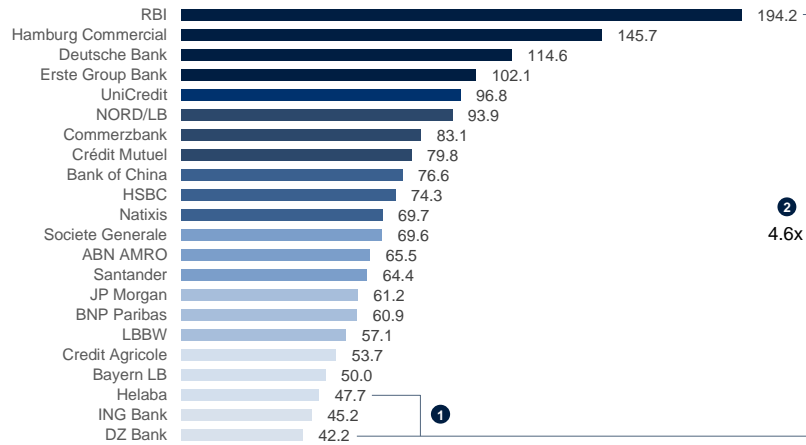
Pricing, Rating, Volatility & Development

1 Based on the latest 5-year CDS spreads, the most solvent banks are the German Helaba and DZ Bank alongside the Dutch ING Bank with CDS spreads below 50 bps

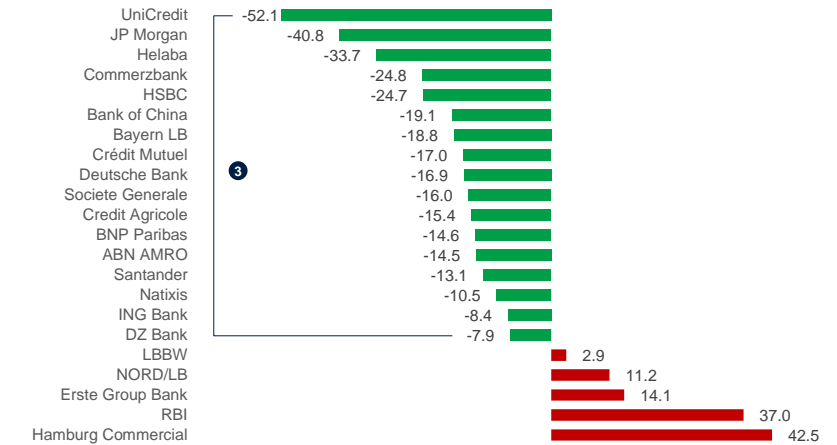
2 The ratio between the least and most solvent bank increased from 4.3x (in 1Q23) to 4.6x (194.2 bps vs. 42.2 bps), driven by the persistently high CDS spreads of Austrian RBI

3 Majority of banks experienced lower CDS spreads than 12 months prior. The largest improvements in CDS spreads were seen with Italian UniCredit, American J.P. Morgan and German Helaba

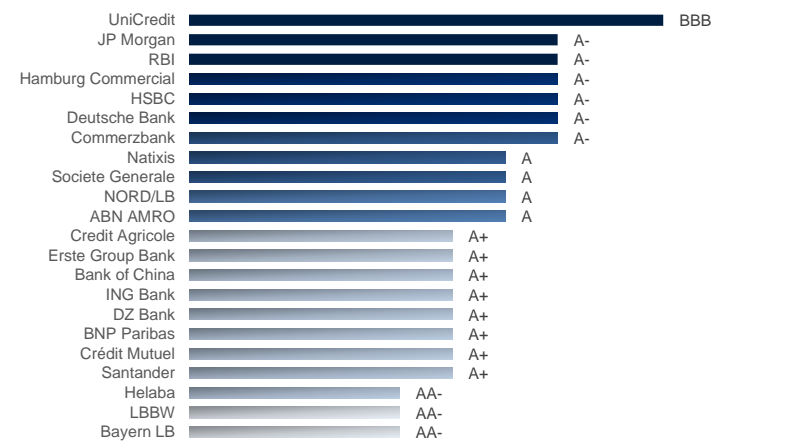
CDS Mid-Price as of 04/07/2023 (in bps)



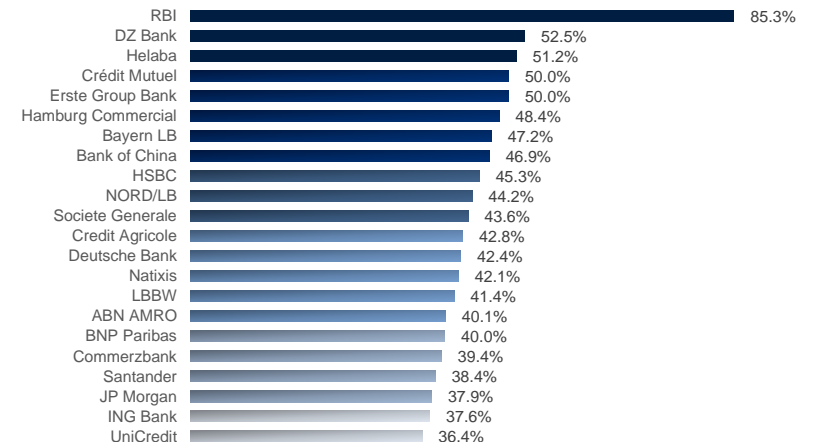
12 Month Change in CDS Mid-Price (in bps)



Long-Term Rating* as of 04/07/2023



3 Month (90 days) Volatility as of 04/07/2023



5-Year CDS Spreads

36 Month Spread Development of German vs. Foreign Institutions

German and foreign banks have showed similar trends over the past 3 years

- 1 In 1Q22, CDS spreads started to increase following the Russia / Ukraine war, peaking in 3Q22 due to increased fears of energy shortages, high inflation and a global recession
- 2 The collapse of major banking institutions in the USA (SVB) and in Europe (Credit Suisse) have caused significant market uncertainty and rising CDS spreads (risk of contagion)
- 3 Decline in CDS spreads in 2Q23, supported by less aggressive monetary tightening and returning confidence in the banking sector



5-Year CDS Spreads

36 Month Spread Development of German Institutions

Over the last 3 years, HCOB and Deutsche Bank were the most volatile German banks with standard deviations of 65 bps and 37 bps, respectively

LBBW and NORD/LB were the least volatile (standard deviations 8 bps and 12 bps, respectively)

1 Growing investor fears of a deep recession peaked in 3Q22 due to fears of a widespread energy shortage and aggressive monetary tightening

2 The collapse of major banking institutions in the USA (SVB) and in Europe (Credit Suisse) have caused market uncertainty and rising CDS spreads



5-Year CDS Spreads

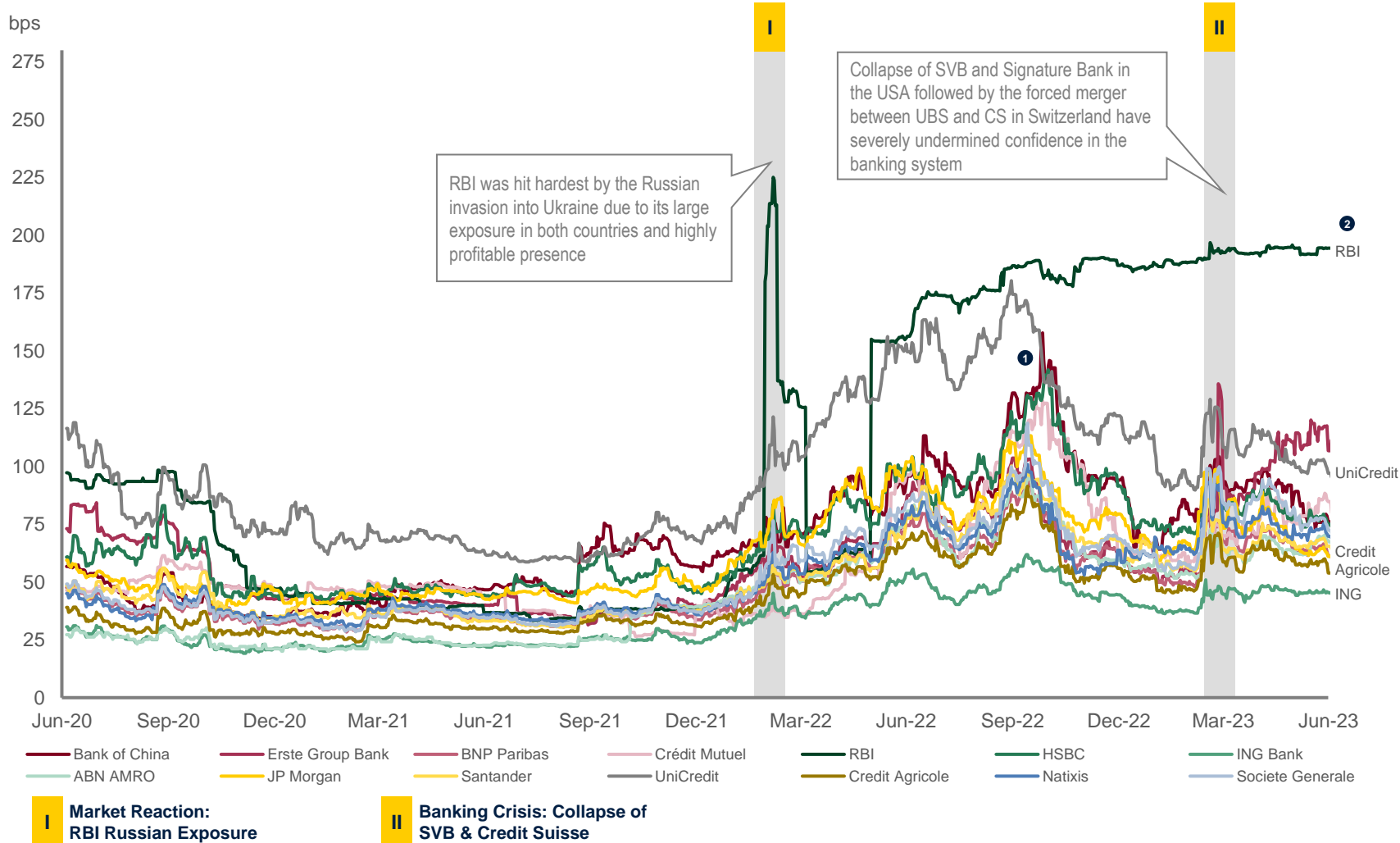
36 Month Spread Development of Foreign Institutions

Over the last 3 years, RBI and UniCredit were the most volatile foreign banks with standard deviations of 65 bps and 31 bps, respectively

ING Bank and Cr dit Agricole were the least volatile (standard deviations of 11 bps and 15 bps, respectively)

1 Growing investor fears of a deep recession peaked in 3Q22 due to fears of a widespread energy shortage and aggressive monetary tightening

2 CDS spreads remain high for RBI as the divestiture process of the highly profitable Russian subsidiary drags on



5-Year CDS Spreads

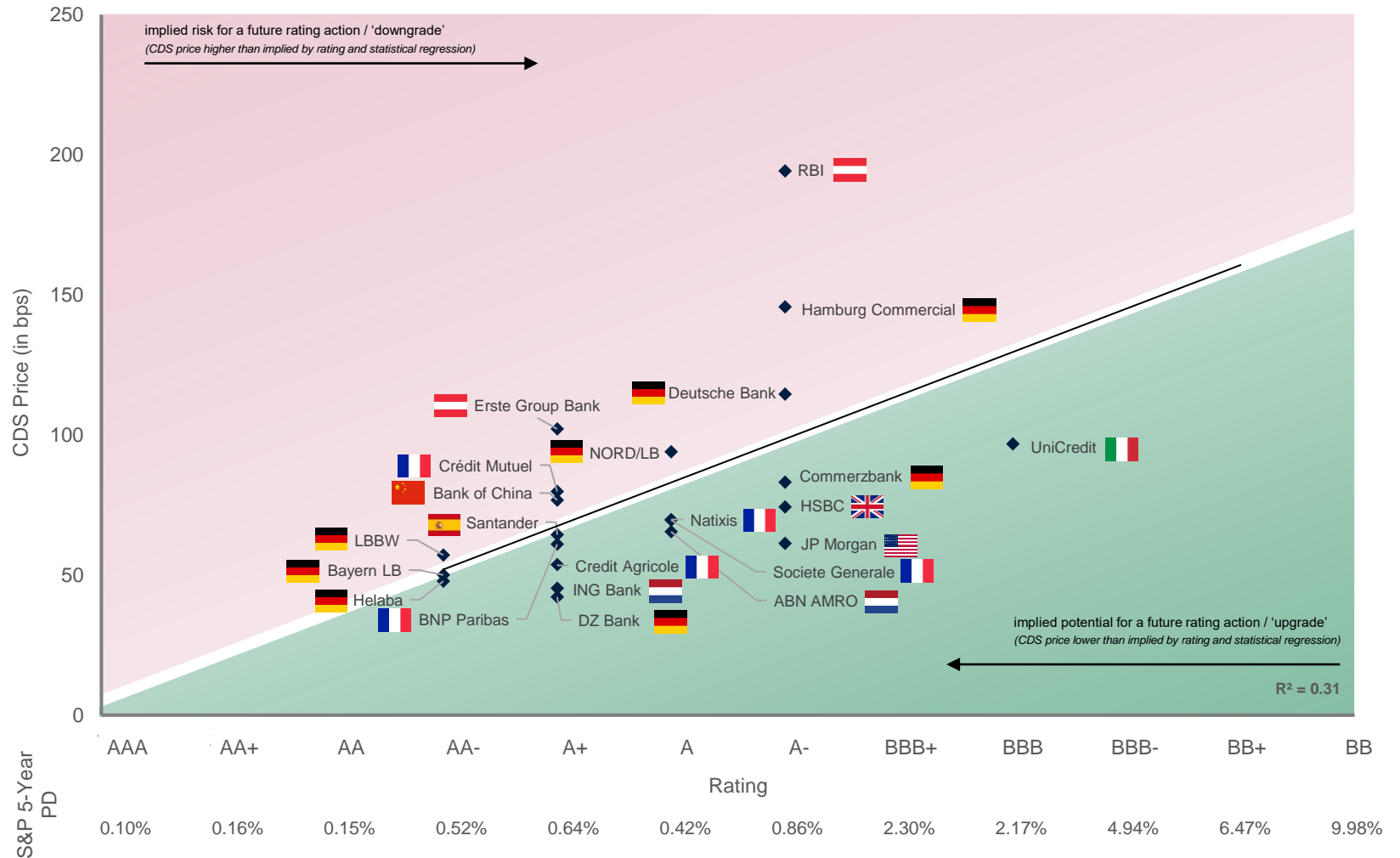
CDS vs. Rating for 5 Year Spreads

The comparison of current CDS spreads with current ratings highlights the relationship between these forward- and backward-looking solvency indicators

The correlation between CDS spreads and ratings decreased substantially from a R^2 of 42% in the previous quarter to 31% in 2Q23

The slope implies that (on average) a 1- notch drop in rating would result in a higher 5-Year CDS price by c. 15.5 bps

Banks above the trendline seem to possess greater solvency risk than their rating would imply; a possible indicator for a future rating 'downgrade'



Source: S&P Capital IQ as of July 4th, 2023

Note: All calculations based on mid prices; rating according to S&P Rating notches, if available. Institutions without S&P Rating converted using best available Moody's or Fitch rating; S&P 5-Year PD represents the 5-year probability of default for each respective rating notch

APPENDIX



Market Ranking Overview

Q2 2023

FCF allocated scores of 1 (low) to 22 (high) to all banks to determine the market's view on each bank, based on:

- i. 1-Year CDS spread;
- ii. 5-Year CDS spread;
- iii. 10-Year CDS spread;
- iv. Public ratings (Fitch, Moody's, S&P)

The combined Weighted CDS and Rating Score result in an overall rank in the League Table, providing an indication on the banks' expected future stability and crisis resistance across maturities

The market views Bayern LB (59.3) on the top of the ranking, whereas RBI ranks last (4.7)

| Rank | Trend | Bank | Country | CDS 1Y | | | | CDS 5Y | | | | CDS 10Y | | | | CDS Weighted CDS Score | Rating | | Total Overall Rank |
|------|-------|-------------------------------|---------|------------|------------|----------------|------------|------------|------------|----------------|------------|------------|------------|----------------|------------|------------------------|-------------|------------|--------------------|
| | | | | Last Price | Rank Score | 90-Day Ø Price | Rank Score | Last Price | Rank Score | 90-Day Ø Price | Rank Score | Last Price | Rank Score | 90-Day Ø Price | Rank Score | | Last Rating | Rank Score | |
| 1 | ↗ | Bayern LB | | 23.6 | 21 | 21.2 | 21 | 50.0 | 19 | 47.1 | 21 | 74.8 | 17 | 70.1 | 19 | 39.3 | 4 | 20 | 59.3 |
| 2 | ↗ | Helaba | | 24.7 | 19 | 30.3 | 18 | 47.7 | 20 | 63.5 | 15 | 66.5 | 20 | 84.2 | 15 | 35.7 | 4 | 20 | 55.7 |
| 3 | ↘ | ING | | 17.0 | 22 | 14.6 | 22 | 45.2 | 21 | 43.0 | 22 | 58.0 | 21 | 56.1 | 22 | 43.3 | 5 | 12 | 55.3 |
| 3 | ↘ | LB BW | | 36.1 | 12 | 30.9 | 17 | 57.1 | 17 | 48.2 | 20 | 68.7 | 19 | 60.9 | 21 | 35.3 | 4 | 20 | 55.3 |
| 5 | ↗ | DZ BANK | | 28.2 | 18 | 32.9 | 16 | 42.2 | 22 | 51.4 | 19 | 54.4 | 22 | 64.4 | 20 | 39.0 | 5 | 12 | 51.0 |
| 6 | ↘ | CRÉDIT AGRICOLE | | 23.8 | 20 | 26.9 | 20 | 53.7 | 18 | 56.5 | 18 | 74.8 | 18 | 76.1 | 18 | 37.3 | 5 | 12 | 49.3 |
| 7 | ↔ | BNP PARIBAS | | 33.8 | 14 | 37.8 | 12 | 60.9 | 16 | 62.1 | 16 | 82.1 | 16 | 83.0 | 16 | 30.0 | 5 | 12 | 42.0 |
| 7 | ↗ | Santander | | 29.8 | 17 | 28.6 | 19 | 64.4 | 14 | 64.9 | 14 | 90.7 | 12 | 89.7 | 14 | 30.0 | 5 | 12 | 42.0 |
| 9 | ↔ | ABN-AMRO | | 39.3 | 9 | 38.3 | 11 | 65.5 | 13 | 61.3 | 17 | 83.2 | 14 | 80.1 | 17 | 27.0 | 6 | 8 | 35.0 |
| 10 | ↔ | Crédit Mutuel | | 39.3 | 8 | 39.5 | 10 | 79.8 | 8 | 71.2 | 13 | 103.5 | 10 | 93.9 | 12 | 20.3 | 5 | 12 | 32.3 |
| 10 | ↗ | NATIXIS | | 37.4 | 11 | 36.8 | 13 | 69.7 | 11 | 71.3 | 12 | 87.1 | 13 | 90.4 | 13 | 24.3 | 6 | 8 | 32.3 |
| 12 | ↗ | 中国银行 BANK OF CHINA | | 30.2 | 16 | 36.7 | 14 | 76.6 | 9 | 83.7 | 6 | 118.1 | 6 | 124.2 | 5 | 18.7 | 5 | 12 | 30.7 |
| 13 | ↗ | SOCIÉTÉ GÉNÉRALE | | 37.7 | 10 | 44.9 | 7 | 69.6 | 12 | 74.4 | 10 | 97.1 | 11 | 96.6 | 10 | 20.0 | 6 | 8 | 28.0 |
| 14 | ↗ | J.P.Morgan | | 30.6 | 15 | 40.7 | 9 | 61.2 | 15 | 72.0 | 11 | 82.3 | 15 | 95.0 | 11 | 25.3 | 7 | 2 | 27.3 |
| 15 | ↘ | ERSTE | | 53.5 | 5 | 55.0 | 5 | 102.1 | 4 | 83.2 | 7 | 132.2 | 4 | 108.6 | 8 | 11.0 | 5 | 12 | 23.0 |
| 16 | ↔ | HSBC | | 34.3 | 13 | 36.0 | 15 | 74.3 | 10 | 79.7 | 9 | 114.7 | 7 | 118.3 | 6 | 20.0 | 7 | 2 | 22.0 |
| 17 | ↔ | NORD/LB | | 65.7 | 4 | 68.9 | 4 | 93.9 | 6 | 101.4 | 5 | 108.6 | 9 | 114.5 | 7 | 11.7 | 6 | 8 | 19.7 |
| 18 | ↘ | COMMERZBANK | | 40.7 | 7 | 43.5 | 8 | 83.1 | 7 | 79.8 | 8 | 113.0 | 8 | 106.6 | 9 | 15.7 | 7 | 2 | 17.7 |
| 19 | ↔ | UniCredit | | 45.3 | 6 | 54.7 | 6 | 96.8 | 5 | 105.7 | 4 | 129.3 | 5 | 136.8 | 4 | 10.0 | 9 | 1 | 11.0 |
| 20 | ↗ | Deutsche Bank | | 82.4 | 3 | 136.0 | 1 | 114.6 | 3 | 122.1 | 3 | 135.1 | 3 | 138.6 | 3 | 5.3 | 7 | 2 | 7.3 |
| 21 | ↘ | Ramburg Commercial Bank | | 93.6 | 2 | 102.8 | 2 | 145.7 | 2 | 163.1 | 2 | 179.2 | 2 | 196.6 | 2 | 4.0 | 7 | 2 | 6.0 |
| 22 | ↘ | Raiffeisen Bank International | | 98.5 | 1 | 98.7 | 3 | 194.2 | 1 | 191.0 | 1 | 225.0 | 1 | 226.7 | 1 | 2.7 | 7 | 2 | 4.7 |

Market Ranking Overview

LTM Development

The German Bayern LB claims the top of the league table, replacing the long standing first place LBBW

The Austrian RBI drops to last place in the ranking following the ongoing uncertainty surrounding its Russian banking division

| | Q3 2022 | Q4 2022 | Q1 2023 | Q2 2023 |
|-----|-------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| 1. | LB≡BW | 1. LB≡BW | 1. LB≡BW | 1. Bayern LB |
| 2. | Bayern LB | 2. Bayern LB | 2. ING | 2. Helaba |
| 3. | ING | 3. ING | 3. Helaba | 3. ING |
| 4. | DZ BANK | 4. CRÉDIT AGRICOLE | 4. CRÉDIT AGRICOLE | 4. LB≡BW |
| 5. | Helaba | 5. DZ BANK | 5. Bayern LB | 5. DZ BANK |
| 6. | CRÉDIT AGRICOLE | 6. Helaba | 6. DZ BANK | 6. CRÉDIT AGRICOLE |
| 7. | BNP PARIBAS | 7. BNP PARIBAS | 7. BNP PARIBAS | 7. BNP PARIBAS |
| 8. | NATIXIS | 8. ABN-AMRO | 8. Santander | 8. Santander |
| 9. | Santander | 9. NATIXIS | 9. ABN-AMRO | 9. ABN-AMRO |
| 10. | ABN-AMRO | 10. Santander | 10. Crédit Mutuel | 10. Crédit Mutuel |
| 11. | SOCIETE GENERALE | 11. Crédit Mutuel | 11. ERSTE | 11. NATIXIS |
| | NORD/LB | 12. ERSTE | 12. NATIXIS | 12. 中國銀行 |
| 13. | Crédit Mutuel | 13. SOCIETE GENERALE | 13. 中國銀行 | 13. SOCIETE GENERALE |
| 14. | ERSTE | 14. 中國銀行 | 14. SOCIETE GENERALE | 14. J.P.Morgan |
| 15. | 中國銀行 | 15. J.P.Morgan | 15. COMMERZBANK | 15. ERSTE |
| 16. | J.P.Morgan | 16. NORD/LB | 16. HSBC | 16. HSBC |
| 17. | HSBC | 17. HSBC | 17. NORD/LB | 17. NORD/LB |
| 18. | COMMERZBANK | 18. COMMERZBANK | 18. J.P.Morgan | 18. COMMERZBANK |
| 19. | Deutsche Bank | 19. Deutsche Bank | 19. UniCredit | 19. UniCredit |
| 20. | Raiffeisen Bank International | 20. Raiffeisen Bank International | 20. Hamburg Commercial Bank | 20. Deutsche Bank |
| | UniCredit | 21. UniCredit | 21. Raiffeisen Bank International | 21. Hamburg Commercial Bank |
| 22. | Hamburg Commercial Bank | 22. Hamburg Commercial Bank | 22. Deutsche Bank | 22. Raiffeisen Bank International |

Fundamental Ranking Overview

Q2 2023

FCF allocated scores of 1 (low) to 22 (high) to the 22 banks, based on:

- i. Return-on-Equity (RoE)
- ii. Return-on-Assets (RoA);
- iii. Tier-1 Capital Ratio;
- iv. Percentage of Non-Performing-Loans of Total Loans;
- v. Cost Efficiency (Cost-Income Ratio)
- vi. Liquidity Coverage Ratio

The equal weighting of the fundamental scores results in the Total Overall Score in the League Table

The ranking provides a key indication for each banks' stability and solvency based on the most recent fundamental performance

RBI (111.0) leads the ranking, whereas Natixis is last (27.0)

| Rank | Trend | Bank | Country | Return on Equity | | Return on Assets | | Tier 1 Capital Ratio | | % Non-perf. Loans | | Cost Efficiency | | Liquidity Coverage | | Total Overall Rank | Delta vs Market View |
|------|-------|-------------------------------|---------|------------------|------------|------------------|------------|----------------------|------------|-------------------|------------|-----------------|------------|--------------------|------------|--------------------|----------------------|
| | | | | RoE | Rank Score | RoA | Rank Score | Tier 1 Ratio | Rank Score | % NPL | Rank Score | CIR | Rank Score | LCR | Rank Score | | |
| 1 | → | Raiffeisen Bank International | | 20.6 | 22 | 1.8 | 22 | 17.7 | 19 | 2.4 | 6 | 36.6 | 21 | 192.5 | 21 | 111.0 | 21 |
| 2 | ↗ | Homburg Commercial Bank | | 8.6 | 12 | 1.4 | 21 | 20.5 | 22 | 1.9 | 10 | 44.0 | 20 | 168.3 | 19 | 104.0 | 19 |
| 3 | ↗ | UniCredit | | 13.2 | 20 | 0.9 | 19 | 18.7 | 21 | 2.4 | 5 | 47.0 | 18 | 161.0 | 17 | 100.0 | 16 |
| 4 | ↗ | Bayern LB | | 8.2 | 10 | 0.4 | 11 | 17.4 | 18 | 0.7 | 20 | 56.2 | 14 | 195.5 | 22 | 95.0 | -3 |
| 5 | ↘ | ERSTE Group | | 11.8 | 18 | 0.9 | 18 | 15.6 | 12 | 1.8 | 11 | 53.4 | 17 | 141.8 | 11 | 87.0 | 10 |
| 5 | ↘ | J.P.Morgan | | 14.3 | 21 | 1.1 | 20 | 15.4 | 10 | 0.6 | 21 | 58.0 | 13 | 112.0 | 2 | 87.0 | 9 |
| 7 | ↘ | HSBC | | 12.1 | 19 | 0.8 | 16 | 17.0 | 17 | 1.8 | 12 | 55.0 | 15 | 131.8 | 4 | 83.0 | 9 |
| 8 | ↘ | 中國銀行 BANK OF CHINA | | 9.5 | 15 | 0.8 | 17 | 13.8 | 4 | 1.2 | 16 | 27.9 | 22 | 133.5 | 6 | 80.0 | 4 |
| 9 | → | Santander | | 10.8 | 17 | 0.6 | 15 | 13.7 | 3 | 3.1 | 2 | 45.8 | 19 | 161.0 | 17 | 73.0 | -2 |
| 9 | ↘ | ABN-AMRO | | 9.3 | 14 | 0.5 | 14 | 16.5 | 15 | 1.7 | 14 | 69.2 | 4 | 144.0 | 12 | 73.0 | 0 |
| 11 | ↗ | Crédit Mutuel | | 7.4 | 7 | 0.4 | 9 | 18.2 | 20 | 2.8 | 3 | 54.6 | 16 | 153.3 | 16 | 71.0 | -1 |
| 11 | ↘ | LB BW | | 10.2 | 16 | 0.5 | 13 | 15.3 | 9 | 0.5 | 22 | 65.6 | 8 | 129.2 | 3 | 71.0 | -8 |
| 13 | → | ING | | 8.2 | 11 | 0.4 | 10 | 14.5 | 7 | 1.8 | 13 | 60.4 | 11 | 136.0 | 8 | 60.0 | -10 |
| 13 | ↗ | Helaba | | 4.5 | 5 | 0.2 | 5 | 14.1 | 5 | 0.8 | 19 | 67.5 | 6 | 176.9 | 20 | 60.0 | -11 |
| 15 | ↗ | COMMERZBANK | | 5.4 | 6 | 0.3 | 7 | 16.1 | 14 | 2.1 | 9 | 61.8 | 10 | 141.1 | 9 | 55.0 | 3 |
| 16 | ↘ | CRÉDIT AGRICOLE | | 9.2 | 13 | 0.3 | 6 | 13.0 | 1 | 2.3 | 7 | 58.5 | 12 | 147.9 | 14 | 53.0 | -10 |
| 17 | ↘ | DZ BANK | | 4.1 | 3 | 0.2 | 2 | 15.2 | 8 | 1.0 | 17 | 67.9 | 5 | 145.3 | 13 | 48.0 | -12 |
| 17 | ↘ | Deutsche Bank | | 8.1 | 9 | 0.4 | 12 | 15.9 | 13 | 2.6 | 4 | 74.9 | 3 | 135.0 | 7 | 48.0 | 3 |
| 19 | ↘ | BNP PARIBAS | | 7.7 | 8 | 0.4 | 8 | 15.5 | 11 | 2.2 | 8 | 66.8 | 7 | 132.3 | 5 | 47.0 | -12 |
| 20 | ↗ | NORD/LB | | 1.5 | 1 | 0.1 | 1 | 14.3 | 6 | 0.9 | 18 | 97.6 | 1 | 150.2 | 15 | 42.0 | -3 |
| 21 | ↘ | SOCIÉTÉ GÉNÉRALE | | 4.1 | 2 | 0.2 | 4 | 16.5 | 15 | 3.1 | 1 | 64.1 | 9 | 141.4 | 10 | 41.0 | -8 |
| 22 | → | NATIXIS BEYOND BANKING | | 4.3 | 4 | 0.2 | 3 | 13.6 | 2 | 1.5 | 15 | 78.9 | 2 | 110.2 | 1 | 27.0 | -12 |

Fundamental Ranking Overview

LTM Development

The Austrian RBI continuous to lead the fundamental ranking table for a second quarter

The Italian UniCredit shows the most positive development over the last year, gaining 11 places from rank 14 in 3Q22 to rank 3 in 2Q23

The German DZ Bank experienced the sharpest drop in the league table, falling six places from rank 11 and 17

| Q3 2022 | Q4 2022 | Q1 2023 | Q2 2023 |
|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| 1. Hamburg Commercial Bank | 1. Hamburg Commercial Bank | 1. Raiffeisen Bank International | 1. Raiffeisen Bank International |
| 2. J.P.Morgan | 2. J.P.Morgan | 2. ERSTE Group | 2. Hamburg Commercial Bank |
| 3. 中國銀行 BANK OF CHINA | 4. Raiffeisen Bank International | 3. J.P.Morgan | 3. UniCredit |
| 4. ERSTE Group | 5. 中國銀行 BANK OF CHINA | 4. UniCredit | 4. Bayern LB |
| 5. Raiffeisen Bank International | 6. ERSTE Group | 5. 中國銀行 BANK OF CHINA | 5. ERSTE Group |
| 6. Crédit Mutuel | 6. Crédit Mutuel | 6. HSBC | J.P.Morgan |
| 7. ING | 7. ING | 7. Hamburg Commercial Bank | 7. HSBC |
| 8. HSBC | 8. HSBC | 8. ABN-AMRO | 8. 中國銀行 BANK OF CHINA |
| 9. Santander | 9. Santander | 9. Santander | 9. Santander |
| 10. DZ BANK | 10. ABN-AMRO | 10. LB BW | 10. ABN-AMRO |
| 11. Bayern LB | 11. DZ BANK | 11. Bayern LB | 11. Crédit Mutuel |
| 12. ABN-AMRO | 12. Bayern LB | 12. DZ BANK | 12. LB BW |
| 13. Helaba S | 13. UniCredit | 13. ING | 13. ING |
| 14. UniCredit | 14. CRÉDIT AGRICOLE | 14. CRÉDIT AGRICOLE | 14. Helaba S |
| 15. CRÉDIT AGRICOLE | 15. Helaba S | 15. Deutsche Bank | 15. COMMERZBANK |
| 16. COMMERZBANK | 16. BNP PARIBAS | 16. Crédit Mutuel | 16. CRÉDIT AGRICOLE |
| 17. LB BW | 17. LB BW | 17. BNP PARIBAS | 17. DZ BANK |
| 18. BNP PARIBAS | 18. COMMERZBANK | 18. COMMERZBANK | 18. Deutsche Bank |
| 19. SOCIÉTÉ GÉNÉRALE | 19. Deutsche Bank | 19. SOCIÉTÉ GÉNÉRALE | 19. BNP PARIBAS |
| 20. NORD/LB | 20. SOCIÉTÉ GÉNÉRALE | 20. Helaba S | 20. NORD/LB |
| 21. Deutsche Bank | 21. NORD/LB | 21. NORD/LB | 21. SOCIÉTÉ GÉNÉRALE |
| 22. NATIXIS BEYOND BANKING | 22. NATIXIS BEYOND BANKING | 22. NATIXIS BEYOND BANKING | 22. NATIXIS BEYOND BANKING |

Credit Default Swaps

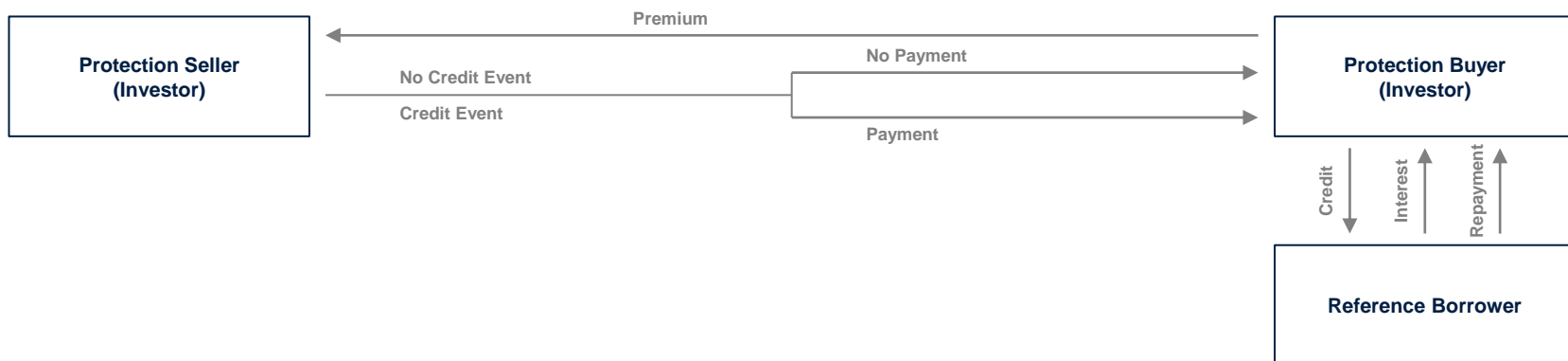
Credit Default Swaps (CDS) are, in simplest terms, very much like insurance policies. The main difference between a classical insurance policy and a CDS is that those buying the CDS can trade in and out of their contracts.

A CDS is a privately negotiated contract in which one party, the Protection Buyer (the one seeking to shed the risk, for example a lender to a bank), pays a fee (also premium or 'spread') to the Protection Seller (the one taking on the risk, for example specialized financial institutions) for protection against a loss that may be incurred from the exposure to a loan in case of unforeseen developments (e.g., non-repayment of / default on the loan). The development is known as a credit event, indicating that the borrower (the reference entity) on which the CDS contract is written is unable to pay its debts. If such a credit event occurs, the Protection Seller will make a payment to the Protection Buyer of the contract.

For example: A typical contract provides for the Protection Buyer to pay the Protection Seller 500 bps per year (5.0% p.a.) for protection against a default of Bank A on its senior debt. The contract's notional size is for EUR 10m. This means that the Protection Buyer pays EUR 500,000 per year (4 quarterly payments of EUR 125,000). If another bank, Bank B, has a CDS spread priced at 250 bps (2.5% p.a.), Bank B is perceived to have a lower credit risk than Bank A.

The higher the credit risk of a bank (as seen in the CDS spread), the greater the funding costs that a bank incurs will be. Funding costs represent the rate at which the bank is able to borrow from the institutional / inter-bank market (funding cost risk premium). As a direct consequence, the funding cost risk premium has a direct impact on the rates that a bank will charge its clients: Bank B will be able to offer i) cheaper, longer financing conditions and ii) greater flexibility during periods of stress with their clients (corporates), ceteris paribus.

Aside from the direct impact on banks' lending rates, the CDS spread is also a good proxy of a banks' current / future behavior towards its corporate clients in times of market (macro) or client specific (micro) volatility / stress.



The FCF Bank Monitor highlights the key developments of German and foreign banks most active in the German and Austrian midcap financing market

The FCF Bank Monitor outlines several key factors that should be considered when selecting banks during a (re)financing of existing financial liabilities

Background Information

- CDS spreads of banks reveal two fundamental market principles that have significant implications for borrowers:
 - **Solvency / crisis resistance:** CDS spreads put a price on the future solvency of a bank according to all information currently available in the market and signal the bank's ability to remain operational in periods of crisis / illiquid markets.
 - Banks with lower, more stable CDS spreads should respond less erratically during periods of stress with their borrowers (i.e., breach of covenant), ceteris paribus
 - **Refinancing costs / ability to lend at low rates:** CDS spreads indicate the perceived solvency of banks, hence their future ability to refinance in the future (funding costs). Consequently, banks with lower, more stable CDS spreads generally have to pay lower risk premia as part of their funding costs, enabling them to offer cheaper, longer financing conditions to their customers / borrowers, ceteris paribus
- Reference bonds of banks and their corresponding CDS spreads are strongly impacted by regulatory changes / events:
 - In '18, the SAG was modified to also allow German commercial banks to issue 'preferred' bonds as of May '19
 - The corresponding reference CDS spreads of German commercial banks (e.g., Deutsche Bank, Commerzbank) decreased sharply in May '19 and can now be compared 'like-for-like' with their European competitors

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