



FCF Bank Monitor

Q1 2024



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 [confidential] Top 10 German Food Company EUR 20m Pending	Syndicated Loan and Factoring Facility ALTENDORF GROUP Altendorf Group GmbH [confidential] January 2024	Capital Increase LimmaTech Biologics AG [confidential] December 2023	European Investment Bank Debt Facility INOVO In Ovo B.V. EUR 40m August 2023	Debt Facility FRANKENGUSS SACHSENGUSS JORA Holding GmbH & Co. KG ~ EUR 30m June 2023	Acquisition Loan Facility KIK PARTNERS KKA Management GmbH EUR 20m May 2023	Capital Increase YOU GONNA FLY aerofols GmbH [confidential] March 2023	M&A (Sell-Side) ENERGIE INSEL Energielinsel [confidential] March 2023	M&A (Sell-Side) PMG PMG Projekttraum Management GmbH [confidential] March 2023	M&A (Sell-Side) SER R UZ SER / RUZ Group [confidential] February 2023	European Investment Bank Debt Facility German Bionic German Bionic Systems GmbH EUR 15m December 2022	Financial Advisory MITTELDEUTSCHE AIRPORT HOLDING Mitteldeutsche Flughafen AG [confidential] December 2022
Syndicated Loan ante ante Holding GmbH & Co. KG [confidential] December 2022	Software-Leasing Facility [confidential] Leading Global Device-as-a-Service Company EUR 10m October 2022	Interest Rate Hedging MITTELDEUTSCHE AIRPORT HOLDING Mitteldeutsche Flughafen AG EUR 150m October 2022	European Investment Bank Debt Facility EVUM MOTORS Evum Motors GmbH > EUR 12m September 2022	Factoring Facility FRANKENGUSS SACHSENGUSS JORA Holding GmbH & Co. KG EUR 25m September 2022	Equity Transaction – Joint Venture with Family Office Doppstadt Doppstadt Group > EUR 50m September 2022	Acquisition Loan and Working Capital Facility Bencis Bencis > EUR 20m May 2022	Acquisition Loan Facility Lloyd Fonds AG Lloyd Fonds AG [confidential] April 2022	Syndicated Loan SCHNELLECKE LOGISTICS Schnellecke Logistics SE EUR 70m December 2021	Syndicated Loan KWD AUTOMOTIVE KWD Automotive AG & Co. KG EUR 70m December 2021	Syndicated Loan, Factoring, Real Estate Sale & Lease-Back [confidential] Top 10 German Food Company EUR 85m October 2021	Syndicated Loan ZIEGLER GROUP 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 (1Q24)

Macro findings

- In 1Q24, CDS spreads of most banks trended down approximately 3% from 4Q23 following ongoing strengthening market confidence in the global economy and the expectation of higher than previously assumed interest rate cuts in 2024. Market expectations regarding inflation have declined and probability of a "soft landing" following rate hikes has increased
- Mean CDS spreads of 67.2 bps (German and foreign institutions), although still considerably higher compared to 2021 levels (42.9 bps; all-time low levels), continue to slowly trend downwards
- The FCF-ranking of domestic and foreign banks operating in the German and Austrian midcap markets, 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: 97.3) heads the league table followed by ING Bank (score: 93.5) and J.P. Morgan (score: 86.2)
 - Deutsche Bank (score: 40.2) completes the league table ranking behind Hamburg Commercial (score: 47.7) and Societe Generale (score: 47.8)
- The variation in CDS spreads and ratings highlights the differences in current 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 11.8 bps (ING Bank) whilst the highest spread lies at 117.8 bps (HCOB), 10.0x higher
 - Across 5-year CDS spreads, the lowest CDS spread lies at 38.0 bps (ING Bank) whilst the highest spread lies at 185.1 bps (RBI), 4.9x higher
 - Across 10-year CDS spreads, the lowest CDS spread lies at 55.2 bps (ING Bank) whilst the highest spread lies at 218.4 bps (RBI), 4.0x higher
 - Across S&P ratings, the highest rating is AA (Bayern LB, LBBW, NORD/LB and Helaba) whilst the lowest rating is BBB (UniCredit)
- The relationship between backward- and forward-looking indicators has weakened over the last quarter, whereby the correlation & explanatory power decreased to an R² of 4%. HCOB and RBI are the largest outliers in 1Q24, 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

- Despite solid fundamentals, German HCOB shows the highest CDS spreads in 1Q24, reflecting overall investor caution in relation to higher perceived risk, asset-based lending activities (especially commercial real estate and shipping finance)
- Austrian RBI shows very high CDS spreads in 1Q24 as investors continue to evaluate the full impact of the ongoing sale / spin-off of its highly profitable Russia business as well as the high exposure to Rene Benko's Signa Group (now in insolvency proceedings)

Combined Ranking Overview (Market & Fundamental)

Q1 2024

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 97.3) heads the league table, whereas Deutsche Bank ranks 22nd (40.2)

Rank	Trend	Bank	Country	Market View				Fundamental View						Fundamental View Score	Combined Total Score	Delta vs Market View	
				CDS 1Y Score	CDS 5Y Score	CDS 10Y Score	Rating Score	Market View Score	RoE	RoA	Tier 1 Cap	% NPL	Cost Eff.				LCR
1	→	Bayern LB	Germany	13	16	17	19	49.3	16	12	17	19	10	22	48.0	97.3	2
2	→	ING	Netherlands	22	22	22	11	55.0	22	15	6	14	13	7	38.5	93.5	-1
3	↗	J.P.Morgan	USA	18	20	19	2	39.7	21	22	15	21	12	2	46.5	86.2	4
4	↘	CRÉDIT AGRICOLE	France	21	21	19	11	51.7	12	6	2	10	11	14	27.5	79.2	-2
5	↗	ERSTE Group	Austria	8	12	11	11	31.7	19	20	17	11	16	11	47.0	78.7	7
6	→	Santander	Spain	20	16	12	11	42.7	15	13	4	2	17	17	34.0	76.7	0
7	↘	LB BW	Germany	7	13	19	19	44.7	13	11	8	20	6	3	30.5	75.2	-2
8	↘	DZ BANK	Germany	6	12	20	11	35.7	10	7	1	22	22	13	37.5	73.2	1
9	↗	ABN-AMRO	Netherlands	11	16	17	7	35.7	14	14	12	13	7	12	36.0	71.7	0
10	↗	UniCredit	Italy	16	6	6	1	19.0	20	19	19	9	19	17	51.5	70.5	9
11	↗	Crédit Mutuel	France	11	13	14	11	36.0	1	9	20	6	14	16	33.0	69.0	-3
12	→	HSBC	UK	20	10	7	2	26.0	17	17	16	12	15	4	40.5	66.5	4
13	↘	BNP PARIBAS	France	17	19	16	11	45.0	7	5	10	5	4	5	18.0	63.0	-9
14	↘	Bank of China	China	9	6	4	11	23.0	11	16	5	17	21	6	38.0	61.0	3
15	↗	Raiffeisen Bank International	Austria	2	2	2	2	5.3	18	21	21	4	18	21	51.5	56.8	6
16	↗	COMMERZBANK	Germany	13	11	9	2	23.0	9	10	14	15	9	9	33.0	56.0	1
17	↗	NORD/LB	Germany	4	5	7	19	29.7	4	1	8	8	8	20	24.5	54.2	-3
18	↘	Helaba	Germany	3	4	7	19	28.3	2	4	7	18	1	15	23.5	51.8	-3
19	↗	NATIXIS BEYOND BANKING	France	15	14	14	7	35.0	5	3	3	16	2	1	15.0	50.0	-8
20	↘	SOCIETE GENERALE	France	13	13	11	7	31.3	3	2	11	3	4	10	16.5	47.8	-7
21	↘	Hamburg Commercial Bank	Germany	1	2	2	2	4.7	6	18	22	1	20	19	43.0	47.7	1
22	→	Deutsche Bank	Germany	7	5	4	7	16.7	8	8	13	7	3	8	23.5	40.2	-2

Source: S&P Capital IQ as of March 31st, 2024

Notes: Please see Appendix for a detailed overview of the market & fundamental data.

Market view score & fundamental view score are scaled down to achieve a 50/50 weight for the total score

Combined Ranking Overview (Market & Fundamental)

LTM Development

German BayernLB secures the top of the league table once again, replacing LBBW at the top of the rankings from 2Q23 onwards

American J.P.Morgan and Austrian Erste Group continue their upward trajectory with J.P.Morgan climbing six ranks since 2Q23 to third place in the latest ranking and Erste Group Bank improving by seven ranks to fifth place within the same time period

	Q2 2023	Q3 2023	Q4 2023	Q1 2024
1.	Bayern LB	Bayern LB	Bayern LB	Bayern LB
2.	LB BW	ING	ING	ING
3.	Helaba	CRÉDIT AGRICOLE	CRÉDIT AGRICOLE	J.P.Morgan
4.	ING	LB BW	LB BW	CRÉDIT AGRICOLE
5.	Santander	Helaba	J.P.Morgan	ERSTE
6.	CRÉDIT AGRICOLE	Santander	Santander	Santander
7.	DZ BANK	DZ BANK	DZ BANK	LB BW
8.	ABN-AMRO	J.P.Morgan	ERSTE	DZ BANK
9.	J.P.Morgan	ERSTE	BNP PARIBAS	ABN-AMRO
10.	中國銀行	Crédit Mutuel	ABN-AMRO	UniCredit
11.	Crédit Mutuel	ABN-AMRO	中國銀行	Crédit Mutuel
12.	ERSTE	中國銀行	HSBC	HSBC
13.	BNP PARIBAS	BNP PARIBAS	UniCredit	BNP PARIBAS
14.	HSBC	HSBC	Helaba	中國銀行
15.	UniCredit	UniCredit	Crédit Mutuel	Raiffeisen Bank International
16.	Raiffeisen Bank International	Raiffeisen Bank International	Raiffeisen Bank International	COMMERZBANK
17.	Hamburg Commercial Bank	Hamburg Commercial Bank	Hamburg Commercial Bank	NORD/LB
18.	SOCIETE GENERALE	SOCIETE GENERALE	COMMERZBANK	Helaba
19.	NATIXIS	NATIXIS	SOCIETE GENERALE	NATIXIS
20.	COMMERZBANK	NORD/LB	NATIXIS	SOCIETE GENERALE
21.	NORD/LB	COMMERZBANK	NORD/LB	Hamburg Commercial Bank
22.	Deutsche Bank	Deutsche Bank	Deutsche Bank	Deutsche Bank



5-YEAR CDS SPREADS

10-Year CDS Spreads

Overview & Historical Analysis

1 Since December 2022, CDS spreads have generally trended downwards. In 1Q24, CDS spreads of foreign & domestic banks trade at a mean of 67.2 bps. Since 2021, all banks showed a significant increase (i.e., deterioration) in CDS spreads, in particular driven by the Russian invasion into Ukraine and the insolvencies of SVB and CS, high inflation and increased economic uncertainty

2 In 1Q24, Bayern LB's, LBBW's, and Helaba's ratings were upgraded by Moody's by one notch, and NORD/LB's rating was upgraded by four notches, in recognition of their improved solvency profiles

German Institutions	10-Year Price Development (in bps)											1 3-Year Changes (in %)			Volatility	2 Long-Term Ratings		
	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Mar-24	Δ 21-24	Δ 22-24	Δ 23-24	90 Days	S&P	Moody's	Fitch
Bayern LB	77.2	75.8	68.6	32.9	38.3	35.3	64.4	37.4	57.2	43.1	51.2	36.8%	-10.5%	18.8%	3.1%	-	Aa2	A
Commerzbank	83.6	90.6	117.3	54.5	124.7	35.2	38.7	44.4	85.9	64.2	52.9	19.1%	-38.4%	-17.7%	1.9%	A-	A2	-
Deutsche Bank	79.7	96.5	162.3	72.4	204.6	60.9	54.5	45.8	123.0	89.0	75.5	64.9%	-38.6%	-15.1%	1.7%	A	A1	A
DZ Bank	75.9	78.1	78.6	70.2	66.1	62.0	62.5	33.6	57.7	53.1	55.2	64.3%	-4.2%	4.1%	2.4%	A+	Aa2	AA
Hamburg Commercial	193.8	187.0	172.1	147.6	149.0	109.0	75.2	66.1	198.5	146.9	193.1	192.4%	-2.7%	31.4%	3.8%	-	A3	-
Helaba	58.3	58.2	52.3	46.2	46.9	42.3	56.0	39.7	67.3	67.1	94.4	137.7%	40.3%	40.6%	3.1%	-	Aa2	AA-
LBBW	61.4	64.8	50.0	36.6	38.8	48.0	46.9	33.1	48.3	51.1	54.8	65.5%	13.5%	7.2%	2.8%	-	Aa2	A
NORD/LB	104.6	114.1	115.8	72.8	93.5	67.2	95.1	69.2	109.0	99.0	89.4	29.2%	-18.0%	-9.7%	3.1%	-	Aa2	A
Min	58.3	58.2	50.0	32.9	38.3	35.2	38.7	33.1	48.3	43.1	51.2	19.1%	-38.6%	-17.7%	1.7%	-	-	-
Max	193.8	187.0	172.1	147.6	204.6	109.0	95.1	69.2	198.5	146.9	193.1	192.4%	40.3%	40.6%	3.8%	-	-	-
Median	78.4	84.3	97.2	62.4	79.8	54.5	59.2	42.1	76.6	65.7	65.4	64.6%	-7.4%	5.6%	3.0%	-	-	-
Mean	91.8	95.7	102.1	66.6	95.3	57.5	61.7	46.2	93.4	76.7	83.3	76.2%	-7.3%	7.4%	2.8%	-	-	-

Foreign Institutions	10-Year Price Development (in bps)											1 3-Year Changes (in %)			Volatility	2 Long-Term Ratings		
	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Mar-24	Δ 21-24	Δ 22-24	Δ 23-24	90 Days	S&P	Moody's	Fitch
ABN AMRO	62.1	66.2	65.4	45.0	64.0	19.6	21.2	39.4	59.4	51.4	45.0	14.1%	-24.4%	-12.6%	1.6%	A	Aa3	A+
Bank of China	120.1	130.4	142.4	66.1	81.8	35.5	34.3	56.6	94.1	70.2	81.1	43.4%	-13.8%	15.6%	1.3%	A+	Aa3	A
BNP Paribas	69.6	70.8	85.6	22.5	73.0	25.4	32.0	33.7	63.2	48.3	42.6	26.4%	-32.6%	-11.9%	1.5%	A+	Aa3	AA-
Credit Agricole	70.3	70.6	73.7	19.8	65.0	23.1	27.7	30.9	55.9	44.6	39.6	28.1%	-29.3%	-11.2%	1.7%	A+	Aa3	AA-
Crédit Mutuel	64.8	41.9	24.0	26.5	40.6	37.2	44.2	39.6	63.3	74.5	44.6	12.5%	-29.5%	-40.1%	6.8%	A+	Aa3	AA-
Erste Group Bank	159.3	123.2	127.7	47.3	52.8	47.5	42.6	39.6	62.5	62.4	48.3	21.9%	-22.7%	-22.7%	2.5%	A+	A1	A
HSBC	52.1	83.1	81.2	35.3	91.3	50.2	44.1	45.6	91.6	60.3	52.8	15.7%	-42.3%	-12.4%	1.5%	A-	A3	A+
ING Bank	54.8	52.4	64.4	16.9	39.1	19.6	21.4	23.8	44.4	35.3	31.3	31.5%	-29.5%	-11.2%	1.5%	A+	A1	AA-
JP Morgan	62.9	72.7	63.8	37.4	69.0	33.0	46.7	48.1	79.5	44.4	41.5	-13.7%	-47.8%	-6.5%	2.0%	A-	A1	AA-
Natixis	58.3	68.5	80.2	30.2	62.0	50.6	34.1	35.8	63.7	54.3	46.6	30.2%	-26.8%	-14.1%	1.6%	A	A1	A+
RBI	239.6	211.5	142.4	62.8	80.8	75.5	47.0	38.7	186.9	185.0	181.5	368.8%	-2.9%	-1.9%	0.8%	A-	A1	-
Santander	79.6	139.7	119.3	31.8	74.9	27.9	35.3	37.8	67.9	52.2	43.6	15.6%	-35.7%	-16.3%	1.6%	A+	A2	A-
Societe Generale	93.7	69.7	84.6	23.4	74.0	26.7	32.8	37.0	68.7	57.1	48.9	32.1%	-28.9%	-14.4%	1.4%	A	A1	A
UniCredit	128.0	132.7	173.8	61.4	177.4	76.3	71.2	67.8	121.9	75.1	65.4	-3.6%	-46.3%	-13.0%	1.4%	BBB	Baa1	BBB
Min	52.1	41.9	24.0	16.9	39.1	19.6	21.2	23.8	44.4	35.3	31.3	-13.7%	-47.8%	-40.1%	0.8%	-	-	-
Max	239.6	211.5	173.8	66.1	177.4	76.3	71.2	67.8	186.9	185.0	181.5	368.8%	-2.9%	15.6%	6.8%	-	-	-
Median	69.9	71.7	82.9	33.6	71.0	34.3	34.8	39.1	65.8	55.7	45.8	24.1%	-29.4%	-12.5%	1.6%	-	-	-
Mean	93.9	95.2	94.9	37.6	74.7	39.2	38.2	41.0	80.2	65.4	58.0	44.5%	-29.5%	-12.3%	1.9%	-	-	-

All Institutions	10-Year Price Development (in bps)											1 3-Year Changes (in %)			Volatility	Long-Term Ratings		
	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Mar-24	Δ 21-24	Δ 22-24	Δ 23-24	90 Days	S&P	Moody's	Fitch
Min	52.1	41.9	24.0	16.9	38.3	19.6	21.2	23.8	44.4	35.3	31.3	-13.7%	-47.8%	-40.1%	0.8%	-	-	-
Max	239.6	211.5	173.8	147.6	204.6	109.0	95.1	69.2	198.5	185.0	193.1	368.8%	40.3%	40.6%	6.8%	-	-	-
Median	76.6	77.0	82.9	41.2	71.0	39.7	44.1	39.5	67.6	58.7	52.0	29.7%	-27.8%	-11.6%	1.7%	-	-	-
Mean	93.2	95.4	97.5	48.2	82.2	45.8	46.7	42.9	85.0	69.5	67.2	56.0%	-21.4%	-5.1%	2.2%	-	-	-

5-Year Govt. Interest Rates	10-Year Price Development (in bps)											3-Year Changes (in %)			Volatility	Long-Term Ratings		
	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Mar-24	Δ 21-24	Δ 22-24	Δ 23-24	90 Days	S&P	Moody's	Fitch
EU Central Government Bond	7.1	1.7	-47.3	-16.6	-26.3	-44.6	-72.4	-47.9	245.1	188.4	229.9	580.3%	-6.2%	22.0%	1.7%	AA+	Aaa	AAA
United Kingdom Government Debt	113.1	125.6	48.0	72.0	90.7	60.6	-11.2	73.1	366.3	336.3	380.5	420.5%	3.9%	13.1%	1.4%	AA	Aa3	AA-

5-Year CDS Spreads

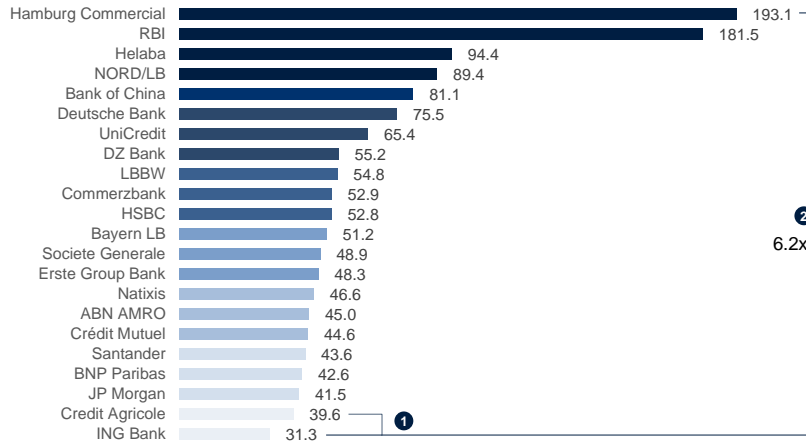
Pricing, Rating, Volatility & Development

1 Based on the latest 5-year CDS spreads, the (implied) most solvent banks are Dutch ING Bank and French Credit Agricole with CDS spreads below 40 bps

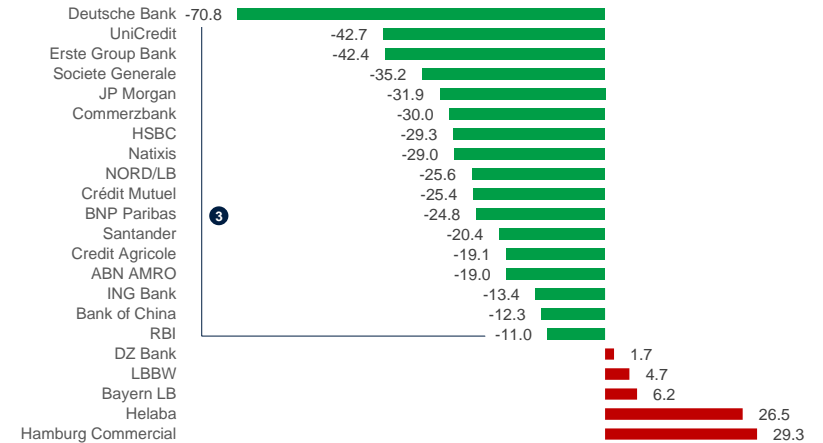
2 The ratio between the least and most solvent bank increased from 5.2x (in 4Q23) to 6.2x (193.1 bps vs. 31.3 bps)

3 Majority of banks experienced lower CDS spreads than 12 months prior. The largest improvements in CDS spreads were seen with German Deutsche Bank, Italian UniCredit and Austrian Erste Group Bank

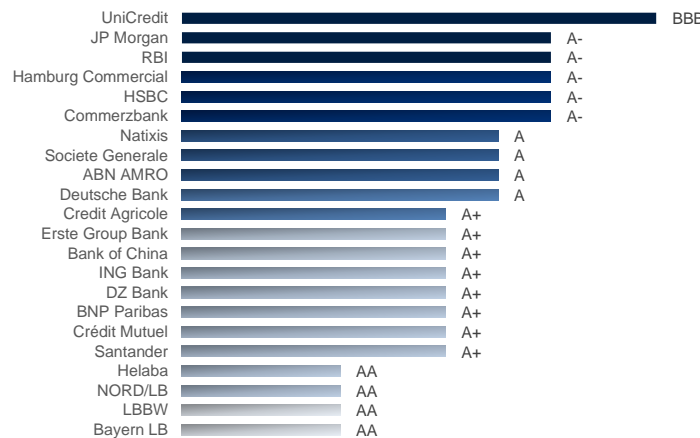
CDS Mid-Price as of 31/03/2024 (in bps)



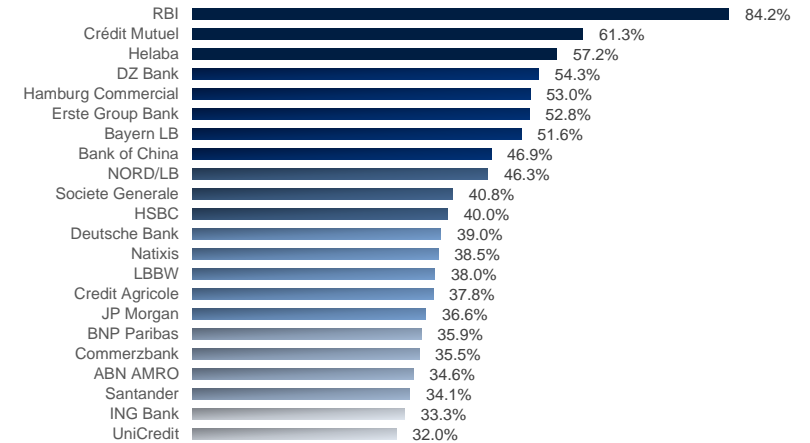
12 Month Change in CDS Mid-Price (in bps)



Long-Term Rating* as of 31/03/2024



3 Month (90 days) Volatility as of 31/03/2024



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 Significant market uncertainty following the collapse of major financial institutions (SVB, Credit Suisse)
- 3 Growing investor / market confidence in the global economy and expected rate cuts in 2024 pull CDS spreads lower



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 63 bps and 36 bps, respectively

LBBW and DZ Bank were the least volatile (standard deviations 9 bps and 11 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

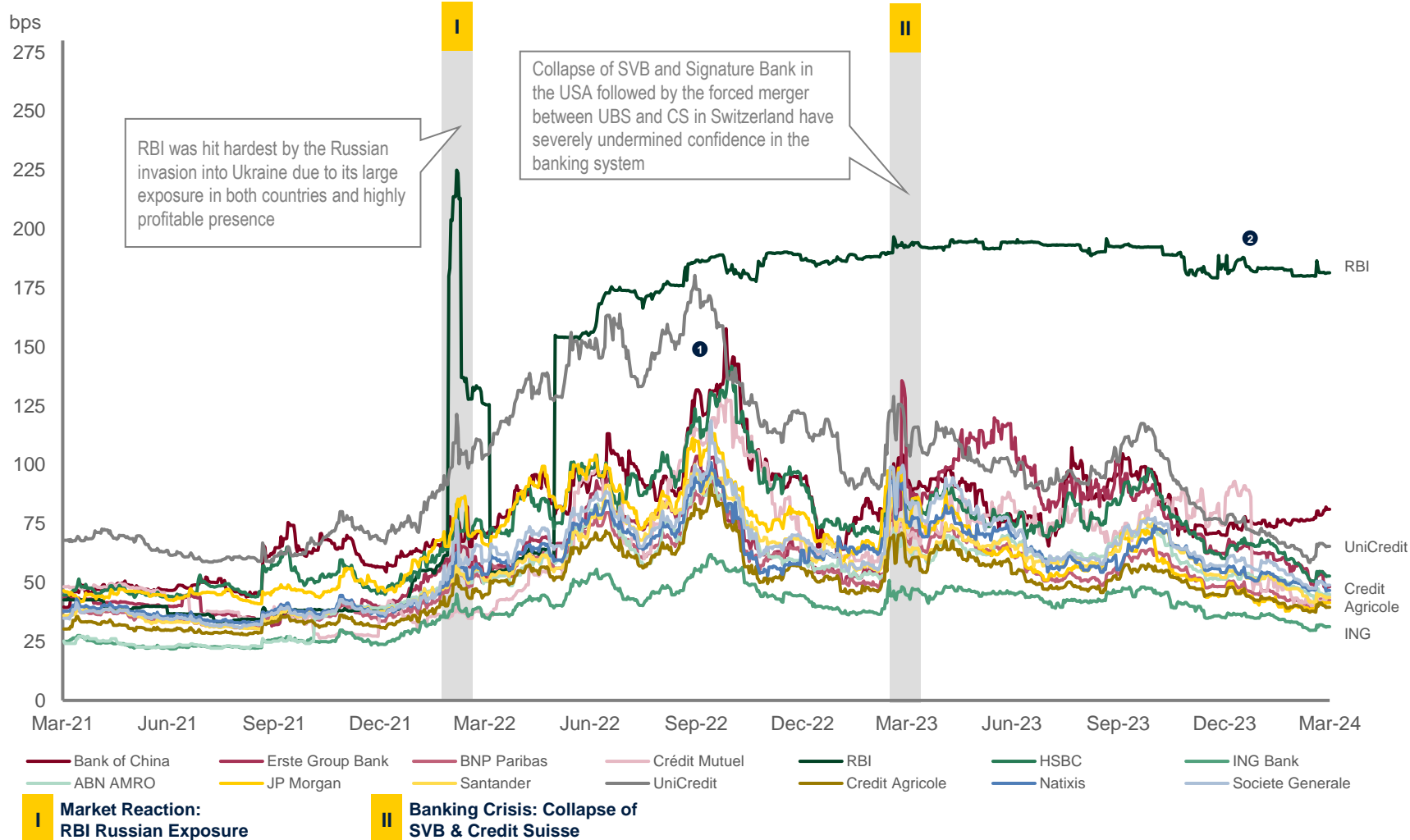
36 Month Spread Development of Foreign Institutions

Over the last 3 years, RBI and UniCredit were the most volatile foreign banks with standard deviations of 57 bps and 26 bps, respectively

ING Bank and Credit Agricole were the least volatile (standard deviations of 8 bps and 11 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

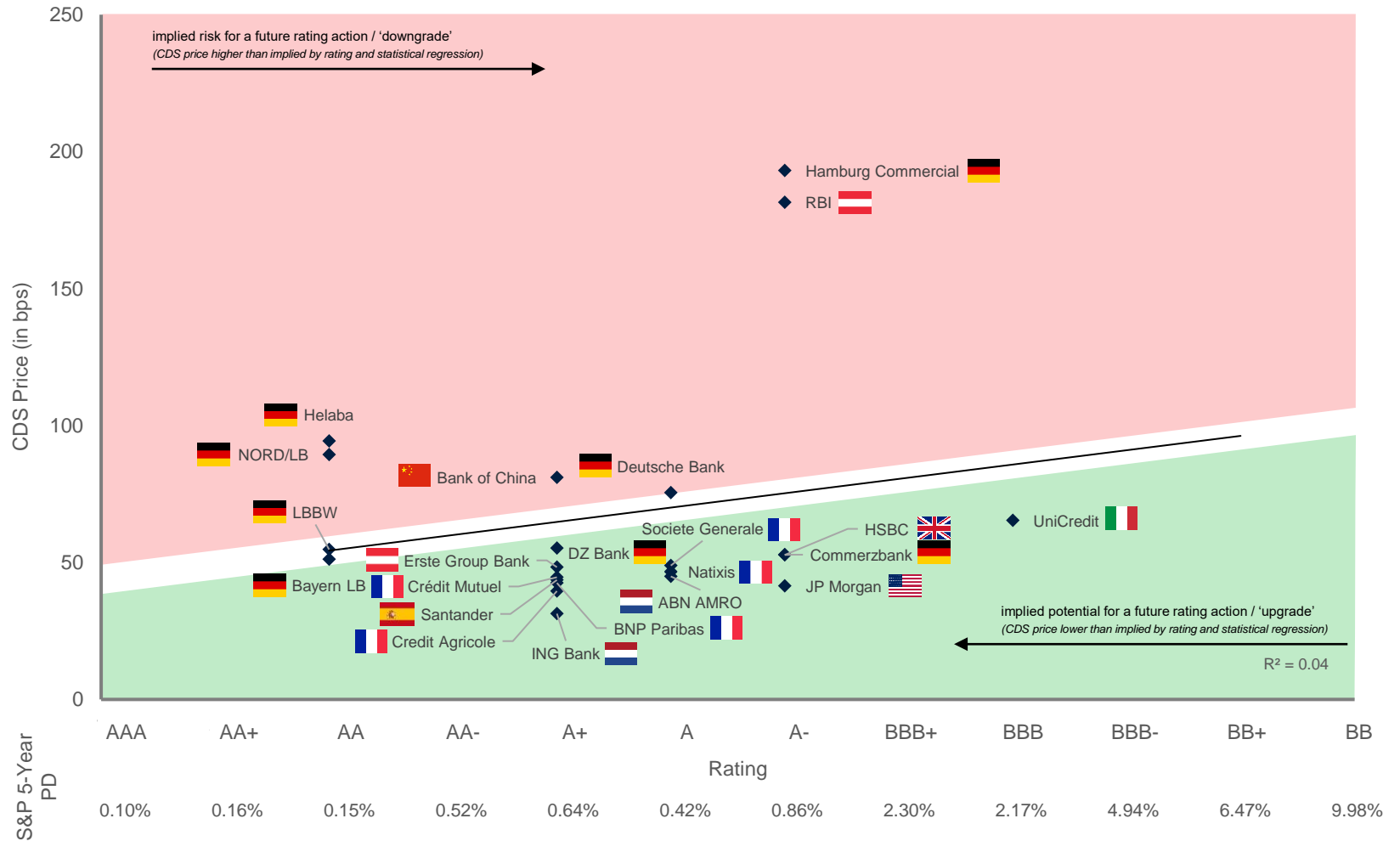
CDS vs. Rating for 5 Year Spreads

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 from an R^2 of 17% in the previous quarter to 4% in 1Q24

The slope implies that (on average) a 1-notch drop in rating would result in a higher 5-Year CDS price by c. 5.2 bps

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



Source: S&P Capital IQ as of March 31st, 2024

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

Q1 2024

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

- 1-Year CDS spread;
- 5-Year CDS spread;
- 10-Year CDS spread;
- 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 ING Bank (55.0) on the top of the ranking, whereas HCOB 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	↗	ING	🇳🇱	10.5	22	11.8	22	31.3	22	38.0	22	51.4	22	55.2	22	44.0	5	11	55.0
2	↗	CRÉDIT AGRICOLE	🇫🇷	14.1	21	17.2	21	39.6	21	46.7	21	66.8	20	70.6	18	40.7	5	11	51.7
3	↘	Bayern LB	🇩🇪	27.5	10	23.5	16	51.2	12	47.1	20	73.4	14	69.8	19	30.3	3	19	49.3
4	↗	BNP PARIBAS	🇫🇷	19.7	17	22.0	17	42.6	19	50.6	18	69.4	15	75.0	16	34.0	5	11	45.0
5	↘	LB BW	🇩🇪	35.9	6	33.4	8	54.8	9	54.5	17	67.7	17	69.0	20	25.7	3	19	44.7
6	↔	Santander	🇪🇸	15.6	19	17.5	20	43.6	18	57.0	14	74.8	11	86.1	13	31.7	5	11	42.7
7	↗	J.P.Morgan	🇺🇸	17.5	18	21.0	18	41.5	20	49.4	19	64.0	21	72.7	17	37.7	7	2	39.7
8	↗	Crédit Mutuel	🇫🇷	23.3	13	29.7	9	44.6	17	68.2	9	69.2	16	94.9	11	25.0	5	11	36.0
9	↘	DZ BANK	🇩🇪	42.4	5	40.1	6	55.2	8	56.1	16	67.6	18	68.7	21	24.7	5	11	35.7
9	↗	ABN-AMRO	🇳🇱	26.4	11	29.4	10	45.0	16	56.3	15	67.5	19	78.7	15	28.7	6	7	35.7
11	↘	NATIXIS	🇫🇷	21.9	15	25.7	14	46.6	15	57.5	13	74.7	13	83.2	14	28.0	6	7	35.0
12	↗	ERSTE Group	🇦🇹	29.0	9	36.1	7	48.3	14	68.1	10	74.7	12	97.0	10	20.7	5	11	31.7
13	↘	SOCIÉTÉ GÉNÉRALE	🇫🇷	22.8	14	27.6	12	48.9	13	60.8	12	84.1	10	91.9	12	24.3	6	7	31.3
14	↘	Helaba	🇩🇪	58.9	4	49.1	4	94.4	3	78.2	7	111.8	5	97.7	9	10.7	3	19	29.7
15	↗	NORD/LB	🇩🇪	72.3	3	73.2	3	89.4	4	92.8	4	101.9	7	105.7	7	9.3	3	19	28.3
16	↔	HSBC	🇬🇧	15.0	20	21.0	19	52.8	11	69.9	8	96.5	8	111.6	6	24.0	7	2	26.0
17	↔	COMMERZBANK	🇩🇪	24.7	12	26.4	13	52.9	10	67.6	11	89.4	9	103.0	8	21.0	7	2	23.0
17	↘	中國銀行	🇨🇳	32.1	7	28.8	11	81.1	5	79.6	6	120.7	3	119.4	4	12.0	5	11	23.0
19	↔	UniCredit	🇮🇹	20.1	16	23.7	15	65.4	7	82.1	5	102.1	6	116.6	5	18.0	9	1	19.0
20	↘	Deutsche Bank	🇩🇪	31.5	8	41.9	5	75.5	6	96.1	3	115.0	4	134.5	3	9.7	6	7	16.7
21	↗	Raiffeisen Bank International	🇦🇹	101.3	2	102.7	2	181.5	2	185.1	1	215.5	2	218.4	1	3.3	7	2	5.3
22	↘	Hamburg Commercial Bank	🇩🇪	136.4	1	117.8	1	193.1	1	157.0	2	224.0	1	189.4	2	2.7	7	2	4.7

Market Ranking Overview

LTM Development

The Dutch ING Bank claims the top of the league table, after replacing Bayern LB at the top of the ranking from 1Q24

In the last quarter, German Helaba saw a significant decline in its ranking, dropping six places from its position in the previous quarter. American J.P. Morgan improved its ranking, ending the quarter on rank 7.

Q2 2023	Q3 2023	Q4 2023	Q1 2024
1. Bayern LB	1. Bayern LB	1. Bayern LB	1. ING
2. Helaba	2. ING	2. ING	2. CRÉDIT AGRICOLE
3. ING	3. Helaba	3. LB BW	3. Bayern LB
4. LB BW	4. LB BW	4. CRÉDIT AGRICOLE	4. BNP PARIBAS
5. DZ BANK	5. CRÉDIT AGRICOLE	5. BNP PARIBAS	5. LB BW
6. CRÉDIT AGRICOLE	6. DZ BANK	6. Santander	6. Santander
7. BNP PARIBAS	7. BNP PARIBAS	7. DZ BANK	7. J.P.Morgan
8. Santander	8. Santander	8. Helaba	8. Crédit Mutuel
9. ABN-AMRO	9. NATIXIS BEYOND BANKING	9. J.P.Morgan	9. DZ BANK
10. Crédit Mutuel	10. Crédit Mutuel	10. NATIXIS BEYOND BANKING	10. ABN-AMRO
11. NATIXIS BEYOND BANKING	11. ABN-AMRO	11. ABN-AMRO	11. NATIXIS BEYOND BANKING
12. SOCIETE GENERALE	12. SOCIETE GENERALE	12. SOCIETE GENERALE	12. ERSTE
13. SOCIETE GENERALE	13. J.P.Morgan	13. BANK OF CHINA	13. SOCIETE GENERALE
14. J.P.Morgan	14. BANK OF CHINA	14. ERSTE	14. Helaba
15. ERSTE	15. ERSTE	15. Crédit Mutuel	15. NORD/LB
16. HSBC	16. HSBC	16. HSBC	16. HSBC
17. NORD/LB	17. NORD/LB	17. COMMERZBANK	17. COMMERZBANK
18. COMMERZBANK	18. COMMERZBANK	18. NORD/LB	18. BANK OF CHINA
19. UniCredit	19. UniCredit	19. Deutsche Bank	19. UniCredit
20. Deutsche Bank	20. Deutsche Bank	20. UniCredit	20. Deutsche Bank
21. Hamburg Commercial Bank	21. Hamburg Commercial Bank	21. Hamburg Commercial Bank	21. Raiffeisen Bank International
22. Raiffeisen Bank International	22. Raiffeisen Bank International	22. Raiffeisen Bank International	22. Hamburg Commercial Bank

Fundamental Ranking Overview

Q1 2024

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 (103.0) leads the ranking, whereas Natixis is last (30.0)

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		
Q1 2024 vs. Q4 2023																	
1	→	Raiffeisen Bank International		13.4	18	1.3	21	19.1	21	3.0	4	43.1	18	192.5	21	103.0	20
1	↗	UniCredit		14.9	20	1.2	19	17.8	19	2.4	9	39.7	19	161.0	17	103.0	18
3	↘	Bayern LB		12.6	16	0.6	12	17.4	17	0.7	19	56.2	10	195.5	22	96.0	0
4	↗	ERSTE Group		14.6	19	1.2	20	17.4	17	2.1	11	47.6	16	141.8	11	94.0	8
5	→	J.P.Morgan		16.0	21	1.3	22	16.6	15	0.5	21	54.0	12	112.0	2	93.0	2
6	↘	Hamburg Commercial Bank		5.9	6	0.9	18	20.5	22	4.1	1	39.0	20	168.3	19	86.0	16
7	→	HSBC		13.0	17	0.8	17	16.9	16	2.0	12	48.5	15	131.8	4	81.0	9
8	↗	ING		17.6	22	0.8	15	14.1	6	1.8	14	51.6	13	134.0	7	77.0	-7
9	↘	中國銀行 BANK OF CHINA		9.3	11	0.8	16	13.8	5	1.3	17	28.5	21	133.5	6	76.0	8
10	↗	DZ BANK		8.2	10	0.4	7	0.0	1	0.0	22	0.0	22	145.3	13	75.0	-1
11	→	ABN-AMRO		11.5	14	0.7	14	15.7	12	1.8	13	60.7	7	144.0	12	72.0	-2
12	↘	Santander		12.1	15	0.7	13	13.8	4	3.3	2	44.1	17	161.0	17	68.0	-6
13	↘	Crédit Mutuel		0.0	1	0.4	9	18.2	20	2.8	6	51.3	14	153.3	16	66.0	-5
13	↗	COMMERZBANK		6.9	9	0.4	10	16.5	14	1.7	15	57.4	9	141.1	9	66.0	4
15	↘	LB BW		11.2	13	0.5	11	15.2	8	0.6	20	65.6	6	129.2	3	61.0	-10
16	↘	CRÉDIT AGRICOLE		9.5	12	0.3	6	13.2	2	2.2	10	55.4	11	147.9	14	55.0	-14
17	→	Helaba		4.6	4	0.2	1	15.2	8	2.5	8	59.4	8	176.9	20	49.0	-3
18	↗	Deutsche Bank		6.6	8	0.4	8	16.1	13	2.8	7	75.1	3	135.0	8	47.0	2
18	→	NORD/LB		4.1	2	0.2	4	14.9	7	0.8	18	97.6	1	150.2	15	47.0	-3
20	↘	BNP PARIBAS		6.6	7	0.3	5	15.3	10	2.8	5	67.5	4	132.3	5	36.0	-16
21	→	SOCIETE GENERALE		4.6	3	0.2	2	15.6	11	3.2	3	67.5	4	141.4	10	33.0	-8
22	→	NATIXIS BEYOND BANKING		5.4	5	0.2	3	13.6	3	1.3	16	75.5	2	110.2	1	30.0	-11

Fundamental Ranking Overview

LTM Development

The Austrian RBI continues to lead the fundamental ranking table for a fifth quarter in a row

The German DZ Bank shows the most positive development over the last quarter, gaining 5 places from rank 15 in 4Q23 to rank 10 in 1Q24

The French Credit Agricole falls back from rank 9 in 4Q23 to 16 in 1Q24

Q2 2023	Q3 2023	Q4 2023	Q1 2024
1. Raiffeisen Bank International	1. Raiffeisen Bank International	1. Raiffeisen Bank International	1. Raiffeisen Bank International
2. Hamburg Commercial Bank	2. UniCredit	2. Bayern LB	2. UniCredit
3. UniCredit	3. Bayern LB	3. UniCredit	3. Bayern LB
4. Bayern LB	4. Hamburg Commercial Bank	4. Hamburg Commercial Bank	4. ERSTE
5. ERSTE	5. ERSTE	5. J.P.Morgan	5. J.P.Morgan
6. J.P.Morgan	6. J.P.Morgan	6. ERSTE	6. Hamburg Commercial Bank
7. HSBC	7. HSBC	7. HSBC	7. HSBC
8. 中國銀行 BANK OF CHINA	8. 中國銀行 BANK OF CHINA	8. 中國銀行 BANK OF CHINA	8. ING
9. Santander	9. CRÉDIT AGRICOLE	9. CRÉDIT AGRICOLE	9. 中國銀行 BANK OF CHINA
10. ABN-AMRO	10. Santander	10. Santander	10. DZ BANK
11. Crédit Mutuel	11. ING	11. ABN-AMRO	11. ABN-AMRO
12. LB BW	12. ABN-AMRO	12. Crédit Mutuel	12. Santander
13. ING	13. Crédit Mutuel	13. ING	13. Crédit Mutuel
14. Helaba	14. LB BW	14. LB BW	14. COMMERZBANK
15. COMMERZBANK	15. DZ BANK	15. DZ BANK	15. LB BW
16. CRÉDIT AGRICOLE	16. COMMERZBANK	16. COMMERZBANK	16. CRÉDIT AGRICOLE
17. DZ BANK	17. Helaba	17. Helaba	17. Helaba
18. Deutsche Bank	18. NORD/LB	18. NORD/LB	18. Deutsche Bank
19. BNP PARIBAS	19. SOCIETE GENERALE	19. BNP PARIBAS	19. NORD/LB
20. NORD/LB	20. Deutsche Bank	20. Deutsche Bank	20. BNP PARIBAS
21. SOCIETE GENERALE	21. BNP PARIBAS	21. SOCIETE GENERALE	21. SOCIETE GENERALE
22. NATIXIS	22. NATIXIS	22. NATIXIS	22. NATIXIS

Credit Default Swaps

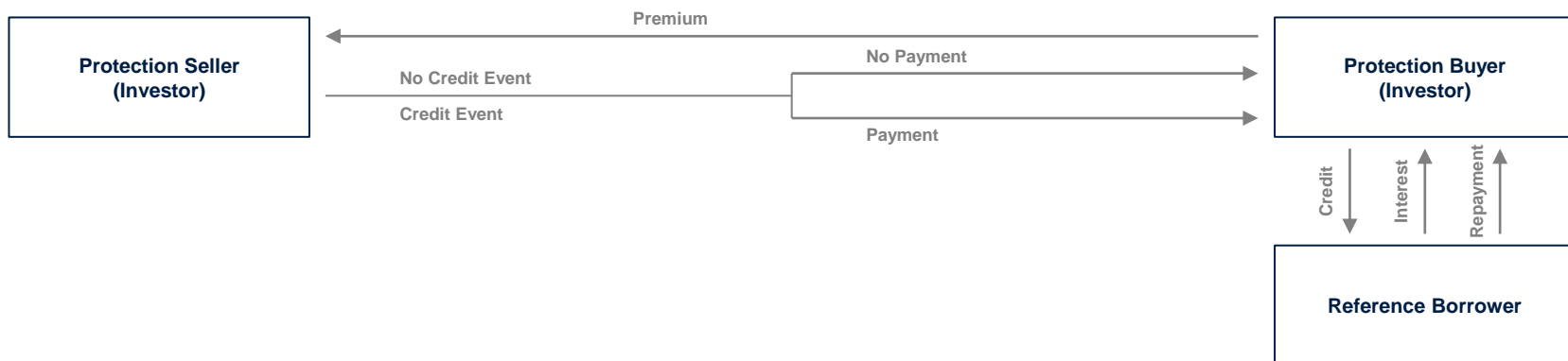
Credit Default Swaps (CDS) are, in simplest terms, very much like insurance policies. The main difference between a classical insurance policy and a CDS is that those buying the CDS can trade in and out of their contracts.

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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