FitchRatings

Banks
Universal Commercial Banks
Switzerland

Zuercher Kantonalbank

Ratings

Long-Term IDR	AAA
Short-Term IDR	F1+
Viability Rating	a+
Shareholder Support Rating	aaa

Sovereign Risk

Long-Term Foreign-Currency IDR	AAA
Long-Term Local-Currency IDR	AAA
Country Ceiling	AAA

Outlooks

Long-Term Foreign-Currency IDR	Stable
Sovereign Long-Term Foreign-Currency IDR	Stable
Sovereign Long-Term Local-Currency IDR	Stable

Key Rating Drivers

Support Drives Ratings: Zuercher Kantonalbank's (ZKB) Issuer Default Ratings (IDRs) are driven by support from its guarantor and sole owner, the Canton of Zurich (AAA/Stable/F1+). ZKB's Shareholder Support Rating (SSR) is equalised with the canton's Long-Term IDR. ZKB's Viability Rating (VR) reflects the bank's stable and resilient business model, conservative risk appetite, strong asset quality, funding and capitalisation, and adequate and improving profitability.

Cantonal Guarantee: The canton guarantees all of ZKB's non-subordinated liabilities according to a specific cantonal law (ZKB Law). ZKB's balance sheet is large relative to the canton's budgetary resources, but we believe the bank's stable and resilient business model, funding, and capital buffers mean that recapitalisation or liquidity support needs would be manageable in a realistic stress scenario.

Timely Support Expected: The canton's guarantee does not explicitly address the timeliness of support, but Fitch Ratings believes that support would be provided in a timely fashion, given ZKB's high importance for the canton and the potential repercussions of systemically important bank's failure for the Swiss financial sector. The canton's constitution also requires it to have a cantonal bank, making the owner more likely to support the bank in financial distress.

Strong Regional Franchise: ZKB's leading franchise in deposit-taking and residential mortgage lending in the Canton of Zurich, where the bank's operations are concentrated, supports the VR. Geographic concentration is mitigated by Zurich's economic strength and the bank's diversified business activities covering retail and commercial banking. ZKB is also the third-largest fund provider and one of the largest asset managers in Switzerland.

Material Real Estate Exposure: ZKB's impaired loans ratio is very low compared with international peers. Its main risk stems from a large real estate exposure in Zurich, with 74% of end-2022 gross customer loans in residential property financing. Fitch believes loan quality would be resilient to a significant decline in property values due to the bank's strict underwriting standards and moderate loan/value ratios.

Improving Earnings: Our assessment of ZKB's profitability reflects its long record of adequate, stable and fairly diversified earnings, despite a material share of trading income in the bank's revenue. Operating profitability (1.4% of risk-weighted assets (RWAs) in 2022) benefits from rising interest rates and we expect it to improve further in 2H23 and 2024.

Strong Capitalisation: ZKB's common equity Tier 1 (CET1) ratio remained strong at 16.8% at end-2022, despite strong loan growth. The canton's guarantee covers half of ZKB's gone-concern capital requirement, which will be fully phased in at 7.86% in 2026. The remaining gap will be covered with bail-in debt that the bank started issuing in 1H23.

Stable Funding: The bank's funding is underpinned by a large and mostly granular deposit base, despite some more concentrated corporate and institutional deposits. Customer deposits account for over half of non-equity funding and almost cover the full volume of loans. Wholesale funding needs are moderate and benefit from the bank's cantonal guarantee, due to which investors perceive ZKB as a haven in times of increased market uncertainty.

Recovery and Resolution Plan: As a domestic systemically important bank (D-SIB), ZKB has a recovery and resolution plan approved by the Swiss banking supervisor. According to this plan, the canton could be required to provide CHF3 billion of capital to recapitalise ZKB. Fitch believes the provision of this capital would be manageable for the canton given its strong financial position, and would not on its own drive negative action on the canton's ratings, or trigger a reassessment of our support assumptions.

Applicable Criteria

Bank Rating Criteria (September 2022)

Related Research

Fitch Affirms Zuercher Kantonalbank at 'AAA'; Outlook Stable (July 2023)

Fitch Affirms Switzerland at 'AAA'; Outlook Stable (May 2023)

Global Economic Outlook (June 2023)

Fitch Affirms Canton of Zurich at 'AAA'; Outlook Stable (November 2022)

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Rating Sensitivities

Factors that Could, Individually or Collectively, Lead to Negative Rating Action/Downgrade

A downgrade of the Canton of Zurich's IDRs would result in a downgrade of ZKB's IDRs and SSR. A material increase in the canton's contingent liabilities, which are dominated by ZKB, could put pressure on ZKB's IDRs and SSR. Contingent liabilities could increase, for instance, because of sustained growth in the bank's balance sheet in excess of the canton's GDP growth, or due to a material delay by the canton in promptly addressing a potential capital shortfall at ZKB.

ZKB's IDRs and SSR are also sensitive to changes to the bank's relationship with the canton, especially if the ZKB Law were amended in a way that would weaken the guarantee's effectiveness or cast doubt on the timeliness of support. However, we view this scenario as unlikely.

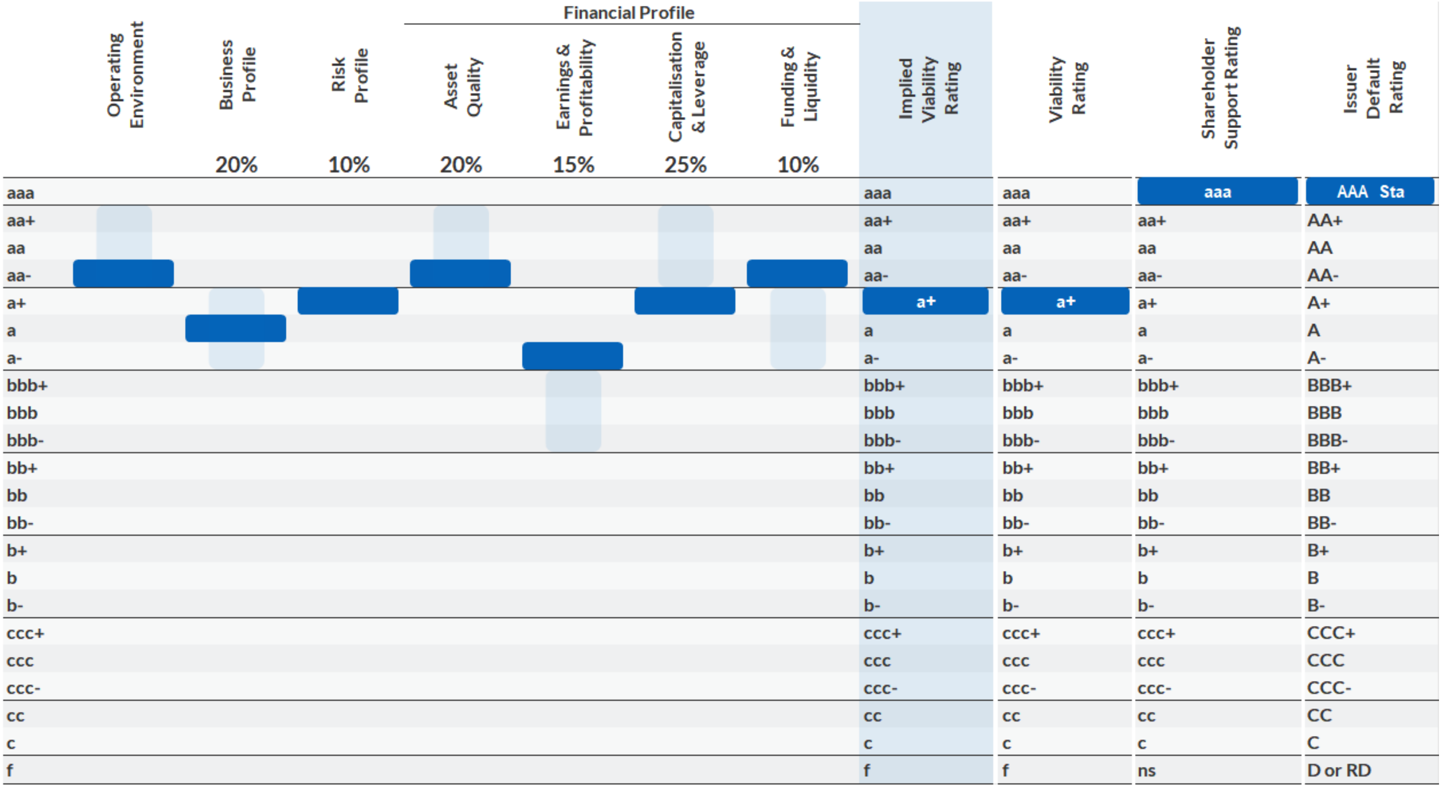
The VR is likely to be downgraded if large real estate-related losses, which could arise from a sharp drop in residential property prices in Zurich, led to a CET1 ratio materially below 16%, or an impaired loans ratio durably above 2%. The rating would also come under pressure if profitability deteriorated durably, or if the bank increased its risk appetite, which could be indicated by higher loan growth or by greater exposure to interest-rate risk in the loan book.

Factors that Could, Individually or Collectively, Lead to Positive Rating Action/Upgrade

The Long-Term IDR is at the highest level on Fitch's scale and cannot be upgraded.

An upgrade of the VR is unlikely given the concentration of ZKB's business model on the Canton of Zurich, resulting in a large exposure to the local property market. An upgrade would also require an improvement in the bank's profitability.

Ratings Navigator



The Key Rating Driver (KRD) weightings used to determine the implied VR are shown as percentages at the top. In cases where the implied VR is adjusted upwards or downwards to arrive at the VR, the KRD associated with the adjustment reason is highlighted in red. The shaded areas indicate the benchmark-implied scores for each KRD.

VR - Adjustments to Key Rating Drivers

The earnings and profitability score of ‘a-’ has been assigned above the ‘bbb’ category implied score, due to the following adjustment reason: revenue diversification (positive).

The capitalisation and leverage score of ‘a+’ has been assigned below the ‘aa’ category implied score, due to the following adjustment reason: capital flexibility and ordinary support (negative).

The funding and liquidity score of ‘aa-’ has been assigned above the ‘a’ category implied score, due to the following adjustment reason: liquidity access and ordinary support (positive).

Company Summary and Key Qualitative Factors

Business Profile

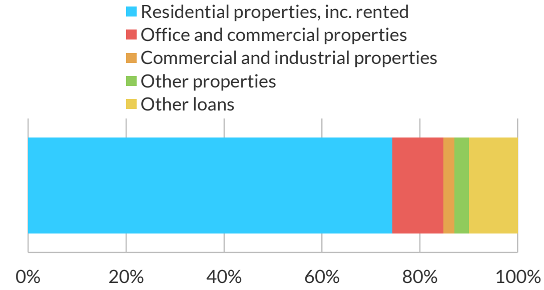
ZKB is the largest cantonal bank in Switzerland and became the third-largest banking group by assets in the country after UBS Group AG's (A/Stable) acquisition of Credit Suisse Group AG (CS). ZKB's public mandate, set out in the ZKB Law, governs its focus on the Zurich region. The law prescribes the bank's activities, focused on providing full banking services to local households and SMEs, as well as helping the canton's economic and social development by supporting access to residential property. Accordingly, ZKB operates the densest branch network in the Canton of Zurich and has a leading regional franchise, with shares of between 30% and 40% in retail deposits and mortgage lending.

Beyond Zurich, ZKB mostly lends to Swiss SMEs and export-focused companies, but the bank's national-level market shares are modest. ZKB is also the third-largest fund provider in the country and one of the largest asset managers in Switzerland, with CHF335 billion of assets under management at end-2022. The bank's domestic and international private-banking franchise remains niche. Fitch believes that UBS's acquisition of CS offers some growth opportunities for ZKB, particularly in asset management and lending to SMEs.

The bank's cantonal owners maintain good oversight of ZKB's activities, including through board representation, and the bank is ultimately supervised by the canton's parliament. In combination with the ZKB Law, this helps to support the stability of ZKB's business model and strategy, also constraining the bank's ability to expand its business activities. This has delivered a stable through-the-cycle performance record. At the same time, we believe that ZKB's management is independent and not subject to undue political influence.

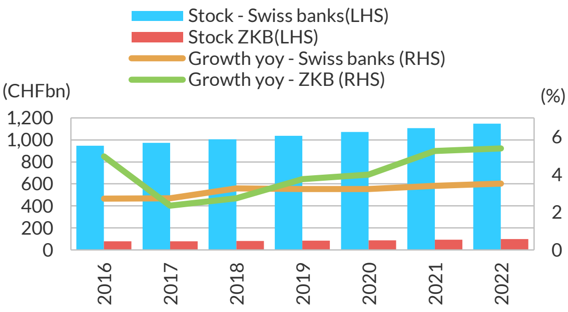
Loan Porfolio Split

End-2022, CHF108bn



Source: Fitch Ratings, ZKB

Swiss Domestic Mortgage Loans



Source: Fitch Ratings, ZKB, SNB

Risk Profile

ZKB's public mandate drives the bank's conservative risk appetite. Fitch considers ZKB's underwriting standards to be low-risk and conservative, to the benefit of its stable and sound loan quality. The bank is proactive in tightening its lending policies based on market changes. ZKB also bases its loan/value calculations on indexed property values, providing an extra buffer in the event of a significant market price correction. ZKB has limited risk appetite for non-recourse commercial real estate lending outside the residential sector.

ZKB pursues organic growth in its investment and asset-management business to further strengthen its income diversification and to reduce the share of net interest income to less than 50% of total operating income. We believe the bank's expertise is sufficiently advanced to cope with volume increases. Although the ZKB Law allows for bank operations outside its home region (subject to not taking any excessive risks or negatively affecting the bank's provision of services locally), we do not expect ZKB to significantly grow its balance sheet outside the canton. Locally it has been growing above market – a trend that we expect to continue.

ZKB's interest-rate risk in the banking book (IRRBB) is in line with that of Swiss peers but above international average, driven by the bank's strategic interest rate position held to hedge the impact of a decline in Swiss franc interest rates on its net interest income. Unrealised losses in its held-to-maturity debt portfolio are low (2% of CET1 capital at end-2022). The bank has been able to manage IRRBB well to date, but an increased appetite for this risk could put the VR under pressure. Trading is client-driven and focuses on foreign exchange (mainly francs to euros), interest-rate and credit derivatives, commodities, and franc- and euro-denominated bonds, as well as other securities.

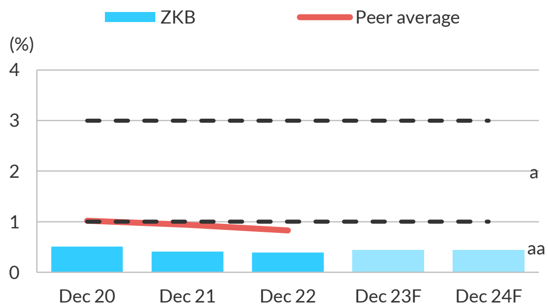
Financial Profile

Asset Quality

ZKB's main risk stems from its large real-estate exposure in Zurich, with about three-quarters of end-2022 gross customer loans consisting of residential mortgages, including rental properties. Fitch believes this concentration on real estate is adequately mitigated by the Canton of Zurich's strong economic fundamentals and the stability of ZKB's asset-quality metrics. Close to 70% of mortgage loans was to private individuals, with a median loan/value of 47% at end-2022, about two-thirds of which are for owner-occupied homes. Loan quality would therefore be resilient to a significant decline in residential property values, but a severe price correction would put pressure on the VR.

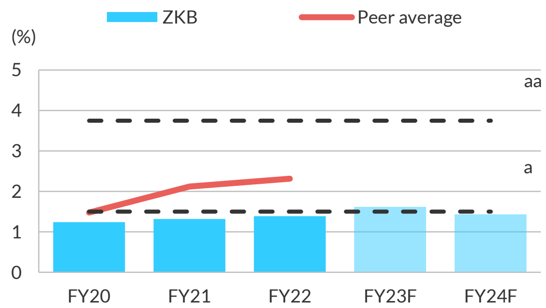
An increase in specific loan impairment charges (LICs) in 2022 was more than compensated by lower expected credit losses, driven by customer preference for variable mortgages with shorter duration. This resulted in LICs for the year amounting to less than a half of their 2021 level. Impaired loans made up 0.4% of gross loans at end-2022. We expect Switzerland's GDP growth to slow in 2023 but unemployment and inflation to fall slightly below their 2022 levels. We therefore expect only a modest increase in LICs in 2023 the impaired loans ratio to remain below 1% in 2023 and 2024.

Impaired Loans/Gross Loans



Source: Fitch Ratings, Fitch Solutions, banks

Operating Profit/Risk-Weighted Assets



Source: Fitch Ratings, Fitch Solutions, banks

Earnings and Profitability

ZKB's universal banking model provides good earnings diversification. The bank posted a record profit of CHF1.1 billion in 2022, driven by the return of interest rates into positive territory in combination with above the market average mortgage lending growth. The latter was driven by financing to institutional clients for residential investment properties. Rising policy rates and slow repricing of deposits should sustain margins growth also in 2023.

Net fees and commissions income (NCI) is an important revenue source for ZKB, accounting for more than a third of the bank's revenue. It was stable in 2022 despite negative market performance. We expect the expansion of the bank's investment product offering and more benign markets to support NCI growth in 2023. Trading activities continue to contribute a material, though more volatile, proportion of operating income (15% in 2022) as the bank has well-established franchises in several trading segments and in structured products.

Personnel expenses increased by 6% in 2022 as the number of employees and variable compensation component increased. Other operating expenses also were up (8%), also due to higher marketing and representation costs as well as IT investments. As a result of a higher increase in revenue than in costs, however, the Fitch-calculated cost/income ratio improved marginally to 61% in 2022 (2021: 62%). The bank's management is working on reducing costs, but we believe ZKB's cost base will remain heavier and less flexible than that of many peers given the cantonal mandate, which limits the bank's ability to close branches to reduce headcount.

Capital and Leverage

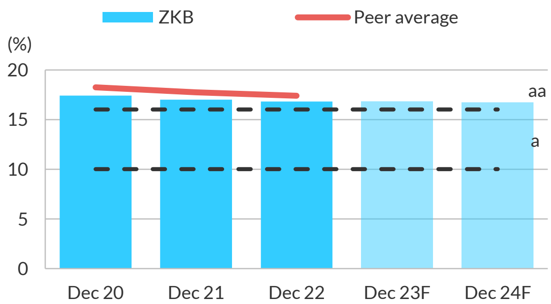
ZKB's CET1 ratio remained strong at 16.8% at end-2022, well above the going-concern capital requirement of 13.8% (including the countercyclical capital buffer). We expect the CET1 ratio to remain broadly unchanged in the next two years and the dividend pay-out ratio to remain below 50% of net profits, in line with ZKB's pre-pandemic distribution levels.

In addition to the dividends, ZKB pays the canton a financial compensation of CHF20 million-CHF30 million a year for its guarantee. The canton's guarantee covers half of ZKB's gone-concern capital requirement, which will be fully phased in at 7.86% of RWAs in 2026, corresponding to CHF6 billion at 2022 RWAs.

ZKB's undrawn endowment capital of CHF1 billion was reserved entirely for the bank's recovery and resolution planning and, as such, qualifies as gone-concern capital. The remaining gap, which we estimate at around

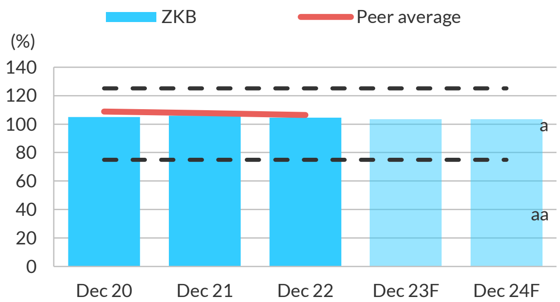
CHF1.1 billion at end-2026, will be covered with bail-in bonds, which ZKB started issuing in 2023 as detailed regulation governing the issuance of bail-in bonds by cantonal banks has been put in place.

CET1 Ratio



Source: Fitch Ratings, Fitch Solutions, banks

Gross Loans/Customer Deposits



Source: Fitch Ratings, Fitch Solutions, banks

Funding and Liquidity

ZKB's wholesale funding needs are moderate and diversified and benefit from ordinary support via the bank's cantonal guarantee and investor perception of ZKB as a safe haven. ZKB's funding profile is underpinned by a large and mostly granular deposit base despite some concentrated corporate deposits. Customer deposits account for over half of non-equity funding. The bank's loans/deposits ratio (105% at end-2022, as calculated by Fitch) has improved since its pre-pandemic levels and we expect it to improve further. The less interest-rate sensitive deposits are favourable in terms of funding costs, that are on the rise for ZKB following the interest rate increases.

The speed of repricing has been low, benefitting ZKB's margins, but we expect it to increase as the competition for deposits intensifies and due to potential political pressure to pass-through remuneration to retail clients. Since mid-2021, ZKB has been required to report its net stable funding ratio, which, at 124% at end-2022, comfortably exceeded regulatory requirements.

As a D-SIB, ZKB is subject to a minimum 135% average liquidity coverage ratio requirement. The bank meets this requirement through high-quality liquid assets, which increased to CHF59 billion at end-2022 (end-2019: CHF44 billion), the most significant proportion of which was in the form of the central bank deposits. The liquidity coverage ratio averaged 144% in 1Q23. The Swiss government is imposing stricter liquidity requirements for D-SIBs from 2024, including over a 90-day stress horizon.

Additional Notes on Charts

The forecasts in the charts in this section reflect Fitch's forward view on the bank's core financial metrics per its *Bank Rating Criteria*. They are based on a combination of Fitch's macro-economic forecasts, outlook at the sector level and company-specific considerations. As a result, Fitch's forecasts may materially differ from the guidance provided by the rated entity to the market

To the extent Fitch is aware of material non-public information with respect to future events, such as planned recapitalisations or merger and acquisition activity, Fitch will not reflect these non-public future events in its published forecasts. However, where relevant, such information is considered by Fitch as part of the rating process.

Black dashed lines represent indicative quantitative ranges and implied scores for Fitch's core financial metrics for banks operating in the environments that Fitch scores in the 'aa' category. Light-blue columns represent Fitch's forecasts.
Peer average includes Basler Kantonalbank (VR: a), Raiffeisen Group (a+), UBS Switzerland AG (a), Swedbank AB (aa-), Santander UK Group Holdings plc (a), Yorkshire Building Society (a-), de Volksbank N.V. (a-).

Financials

Financial Statements

	31 Dec 22		31 Dec 21	31 Dec 20	31 Dec 19
	(USDm)	(CHFm)	(CHFm)	(CHFm)	(CHFm)
	Audited - unqualified	Audited - unqualified	Audited - unqualified	Audited - unqualified	Audited - unqualified
Summary income statement					
Net interest and dividend income	1,527	1,421	1,287	1,258	1,210
Net fees and commissions	995	926	926	806	777
Other operating income	455	423	371	488	421
Total operating income	2,978	2,770	2,584	2,552	2,408
Operating costs	1,820	1,693	1,594	1,665	1,568
Pre-impairment operating profit	1,158	1,077	990	887	840
Loan and other impairment charges	19	18	39	39	-6
Operating profit	1,138	1,059	951	848	846
Other non-operating items (net)	9	8	0	25	4
Tax	9	8	9	8	5
Net income	1,138	1,059	942	865	845
Other comprehensive income	n.a.	n.a.	n.a.	n.a.	n.a.
Fitch comprehensive income	1,138	1,059	942	865	845
Summary balance sheet					
Assets					
Gross loans	116,110	108,017	102,365	97,120	93,375
- Of which impaired	457	425	418	500	435
Loan loss allowances	658	612	627	188	159
Net loans	115,452	107,405	101,738	96,932	93,216
Interbank	3,157	2,937	3,173	3,396	4,917
Derivatives	1,279	1,190	1,272	1,593	1,486
Other securities and earning assets	50,005	46,520	43,645	33,032	29,316
Total earning assets	169,894	158,052	149,828	134,953	128,935
Cash and due from banks	43,322	40,302	40,883	52,154	36,786
Other assets	1,545	1,437	1,394	1,257	1,333
Total assets	214,760	199,791	192,105	188,364	167,054
Liabilities					
Customer deposits	111,094	103,351	96,777	92,609	85,089
Interbank and other short-term funding	53,521	49,791	39,300	39,661	39,051
Other long-term funding	27,381	25,473	38,608	36,286	23,250
Trading liabilities and derivatives	6,129	5,702	3,059	5,721	6,205
Total funding and derivatives	198,126	184,317	177,744	174,277	153,595
Other liabilities	2,338	2,175	1,687	1,437	1,122
Preference shares and hybrid capital	n.a.	n.a.	n.a.	n.a.	n.a.
Total equity	14,295	13,299	12,674	12,650	12,337
Total liabilities and equity	214,760	199,791	192,105	188,364	167,054
Exchange rate		USD1 = CHF0.9303	USD1 = CHF0.9202	USD1 = CHF0.88985	USD1 = CHF0.97165

Source: Fitch Ratings, Fitch Solutions, Zuercher Kantonalbank

Key Ratios

	31 Dec 22	31 Dec 21	31 Dec 20	31 Dec 19
Profitability				
Operating profit/risk-weighted assets	1.4	1.3	1.2	1.3
Net interest income/average earning assets	0.9	0.9	0.9	1.0
Non-interest expense/gross revenue	61.4	62.0	65.6	65.8
Net income/average equity	8.2	7.5	7.0	7.0
Asset quality				
Impaired loans ratio	0.4	0.4	0.5	0.5
Growth in gross loans	5.5	5.4	4.0	3.9
Loan loss allowances/impaired loans	144.0	150.0	37.6	36.6
Loan impairment charges/average gross loans	0.0	0.0	0.0	0.0
Capitalisation				
Common equity Tier 1 ratio	16.8	17.0	17.4	17.7
Tangible common equity/tangible assets	6.7	6.6	6.7	7.3
Basel leverage ratio	6.2	6.2	6.2	6.6
Net impaired loans/common equity Tier 1	-1.5	-1.7	2.6	2.4
Funding and liquidity				
Gross loans/customer deposits	104.5	105.8	104.9	109.7
Liquidity coverage ratio	146.0	160.0	160.0	123.0
Customer deposits/total non-equity funding	56.7	54.8	53.4	55.9
Net stable funding ratio	124.0	118.0	n.a.	n.a.

Source: Fitch Ratings, Fitch Solutions, Zuercher Kantonalbank

Support Assessment

Shareholder Support	
Parent IDR	AAA
Total Adjustments (notches)	0
Shareholder Support Rating	aaa
Shareholder ability to support	
Shareholder Rating	AAA/ Stable
Shareholder regulation	Equalised
Relative size	1 Notch
Country risks	Equalised
Shareholder propensity to support	
Role in group	Equalised
Reputational risk	Equalised
Integration	1 Notch
Support record	Equalised
Subsidiary performance and prospects	Equalised
Legal commitments	Equalised

The colours indicate the weighting of each KRD in the assessment.
Higher influence Moderate influence Lower influence

ZKB's SSR is based on support from the Canton of Zurich, the bank's guarantor and sole owner, and is equalised with the canton's IDRs. The canton guarantees all of ZKB's non-subordinated liabilities according to the ZKB Law. ZKB's balance sheet is large relative to the canton's budgetary resources, but Fitch believes the bank's stable and resilient business model, funding and capital buffers would mean manageable recapitalisation or liquidity support needs in a realistic stress scenario.

The canton's guarantee does not explicitly address the timeliness of support, but Fitch believes that support, if necessary, would be provided in a timely fashion, given ZKB's high importance for the canton and the potential repercussions of a failure for the Swiss financial sector.

ZKB's strategic importance is underpinned by the bank's mandate to provide financial services to individuals and companies in the canton. The bank's nationwide and international activities are limited. The Canton of Zurich's constitution also requires the canton to have a cantonal bank, making the institutional owner more likely to support the bank in financial distress.

As a D-SIB, ZKB has a Swiss emergency plan, to be approved by FINMA. The plan requires the canton to commit a large volume of contingent capital relative to its own resources. We believe that the provision of this contingent capital, if needed, would be manageable for the canton given its strong financial position, and would not on its own drive a negative action on the canton's ratings, or trigger a reassessment of our support assumptions underpinning ZKB's IDRs.

Environmental, Social and Governance Considerations

FitchRatings **Zuercher Kantonalbank**

Banks
Ratings Navigator

Credit-Relevant ESG Derivation

Zuercher Kantonalbank has 5 ESG potential rating drivers

- Zuercher Kantonalbank has exposure to compliance risks including fair lending practices, mis-selling, repossession/foreclosure practices, consumer data protection (data security) but this has very low impact on the rating.
- Governance is minimally relevant to the rating and is not currently a driver.

			ESG Relevance to Credit Rating
key driver	0	issues	5
driver	0	issues	4
potential driver	5	issues	3
not a rating driver	4	issues	2
	5	issues	1

Environmental (E) Relevance Scores

General Issues	E Score	Sector-Specific Issues	Reference	E Relevance
GHG Emissions & Air Quality	1	n.a.	n.a.	5
Energy Management	1	n.a.	n.a.	4
Water & Wastewater Management	1	n.a.	n.a.	3
Waste & Hazardous Materials Management; Ecological Impacts	1	n.a.	n.a.	2
Exposure to Environmental Impacts	2	Impact of extreme weather events on assets and/or operations and corresponding risk appetite & management; catastrophe risk; credit concentrations	Business Profile (incl. Management & governance); Risk Profile; Asset Quality	1

Social (S) Relevance Scores

General Issues	S Score	Sector-Specific Issues	Reference	S Relevance
Human Rights, Community Relations, Access & Affordability	2	Services for underbanked and underserved communities: SME and community development programs; financial literacy programs	Business Profile (incl. Management & governance); Risk Profile	5
Customer Welfare - Fair Messaging, Privacy & Data Security	3	Compliance risks including fair lending practices, mis-selling, repossession/foreclosure practices, consumer data protection (data security)	Operating Environment; Business Profile (incl. Management & governance); Risk Profile	4
Labor Relations & Practices	2	Impact of labor negotiations, including board/employee compensation and composition	Business Profile (incl. Management & governance)	3
Employee Wellbeing	1	n.a.	n.a.	2
Exposure to Social Impacts	2	Shift in social or consumer preferences as a result of an institution's social positions, or social and/or political disapproval of core banking practices	Business Profile (incl. Management & governance); Financial Profile	1

Governance (G) Relevance Scores

General Issues	G Score	Sector-Specific Issues	Reference	G Relevance
Management Strategy	3	Operational implementation of strategy	Business Profile (incl. Management & governance)	5
Governance Structure	3	Board independence and effectiveness; ownership concentration; protection of creditor/stakeholder rights; legal /compliance risks; business continuity; key person risk; related party transactions	Business Profile (incl. Management & governance); Earnings & Profitability; Capitalisation & Leverage	4
Group Structure	3	Organizational structure; appropriateness relative to business model; opacity; intra-group dynamics; ownership	Business Profile (incl. Management & governance)	3
Financial Transparency	3	Quality and frequency of financial reporting and auditing processes	Business Profile (incl. Management & governance)	2
				1

How to Read This Page
ESG relevance scores range from 1 to 5 based on a 15-level color gradation. Red (5) is most relevant to the credit rating and green (1) is least relevant.

The Environmental (E), Social (S) and Governance (G) tables break out the ESG general issues and the sector-specific issues that are most relevant to each industry group. Relevance scores are assigned to each sector-specific issue, signaling the credit-relevance of the sector-specific issues to the issuer's overall credit rating. The Criteria Reference column highlights the factor(s) within which the corresponding ESG issues are captured in Fitch's credit analysis. The vertical color bars are visualizations of the frequency of occurrence of the highest constituent relevance scores. They do not represent an aggregate of the relevance scores or aggregate ESG credit relevance.

The Credit-Relevant ESG Derivation table's far right column is a visualization of the frequency of occurrence of the highest ESG relevance scores across the combined E, S and G categories. The three columns to the left of ESG Relevance to Credit Rating summarize rating relevance and impact to credit from ESG issues. The box on the far left identifies any ESG Relevance Sub-factor issues that are drivers or potential drivers of the issuer's credit rating (corresponding with scores of 3, 4 or 5) and provides a brief explanation for the relevance score. All scores of '4' and '5' are assumed to result in a negative impact unless indicated with a '+' sign for positive impact.h scores of 3, 4 or 5) and provides a brief explanation for the score.

Classification of ESG issues has been developed from Fitch's sector ratings criteria. The General Issues and Sector-Specific Issues draw on the classification standards published by the United Nations Principles for Responsible Investing (PRI), the Sustainability Accounting Standards Board (SASB), and the World Bank.

CREDIT-RELEVANT ESG SCALE

How relevant are E, S and G issues to the overall credit rating?

5	Highly relevant, a key rating driver that has a significant impact on the rating on an individual basis. Equivalent to "higher" relative importance within Navigator.
4	Relevant to rating, not a key rating driver but has an impact on the rating in combination with other factors. Equivalent to "moderate" relative importance within Navigator.
3	Minimally relevant to rating, either very low impact or actively managed in a way that results in no impact on the entity rating. Equivalent to "lower" relative importance within Navigator.
2	Irrelevant to the entity rating but relevant to the sector.
1	Irrelevant to the entity rating and irrelevant to the sector.

Unless otherwise disclosed in this section, the highest level of ESG credit relevance is a score of '3'. This means ESG issues are credit neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity. For more information on Fitch's ESG Relevance Scores, visit www.fitchratings.com/esg.

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