

Research

Aargauische Kantonalbank

Primary Credit Analyst: Harm Semder, Frankfurt (49) 69-33-999-158; harm.semder@spglobal.com

Secondary Contact: Heiko Verhaag, CFA, FRM, Frankfurt (49) 69-33-999-215; heiko.verhaag@spglobal.com

.....

Table Of Contents

Major Rating Factors

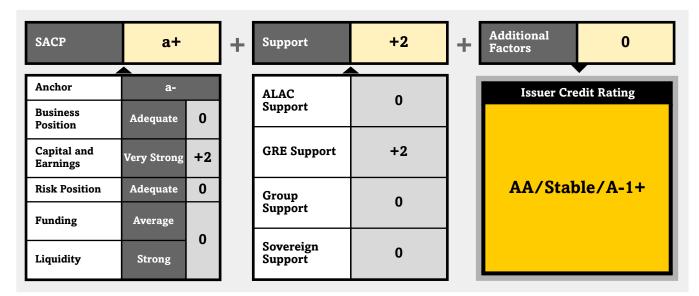
Outlook

Rationale

Related Criteria

Related Research

Aargauische Kantonalbank



Major Rating Factors

Strengths:	Weaknesses:
 A sound financial profile, underpinned by very strong capitalization and sustained profitability. High-quality loan book, dominated by granular and well-collateralized residential mortgages. Ownership and statutory guarantee by and extremely high likelihood of support from the financially strong Canton of Aargau, if needed. 	 Concentration risks from limited geographic diversity and focus on residential mortgage lending. Subdued growth prospects in the competitive home market. Limited earnings diversification due to focus on real estate lending.

WWW.STANDARDANDPOORS.COM

Outlook: Stable

S&P Global Ratings' stable outlook on Switzerland-based Aargauische Kantonalbank (AKB) reflects that on its owner and guarantor, Canton of Aargau. Moreover, we expect that AKB will continue to benefit from being a government-related entity (GRE) with an extremely high likelihood of receiving support from Aargau over the next two years, if needed. In addition, we expect that AKB will maintain its sound financial profile, underpinned by its very strong capitalization and sound earnings capacity over that period.

A negative rating action is very remote at present. However, it could be triggered by a downward revision of our assessment of AKB's role for, or link with Aargau, or changes in the statutory guarantee, which may lead us to reassess AKB's status as a GRE. However, we currently consider this scenario unlikely and expect AKB's existing obligations would be grandfathered.

We could consider an upgrade of AKB if Aargau's creditworthiness were to strengthen to 'AAA' or if AKB's stand-alone credit profile (SACP) were to improve to 'aa-'. However, we regard the latter scenario as unlikely, given our expectation that the bank will not change its concentrated business model or be able to materially improve its risk and funding position.

Rationale

The 'AA' long-term rating on AKB is based on our 'a-' anchor for Swiss domestic banks and the bank's stable but concentrated business operations. The rating also takes into account AKB's very strong risk-adjusted capitalization and the high quality of its loan portfolio. We also take into account AKB's diversified funding profile that is dominated by stable retail deposits and its strong liquidity position. Based on these factors, we view AKB's stand-alone credit profile (SACP) at 'a+'.

Furthermore, we consider AKB to be a GRE with an extremely high likelihood of receiving timely and sufficient extraordinary government support in times of financial distress. We base this on our view of AKB's very important role for and integral link with its home canton, the Canton of Aargau. We therefore apply a three-notch uplift to our assessment of AKB's SACP.

Anchor:'a-' for domestic banks operating solely in Switzerland

Our criteria use our Banking Industry Country Risk Assessment (BICRA) economic risk and industry risk scores to determine a bank's anchor, the starting point in assigning an issuer credit rating (ICR). Our anchor for a bank operating mainly in Switzerland is 'a-'. We view the trends for both economic and industry risk as stable.

Our economic risk score of '2' for Switzerland is supported by the country's highly diversified and competitive economy, very high household income levels, and banks' prudent loan underwriting standards. However, we also consider housing market risks. In our view, both house prices and household indebtedness remain historically high. The investment property segment (30% of the market) is a particular risk, in our view, where we have observed first signs of a price correction. We expect imbalances to remain moderate in a global context, also due to the regulator's macro prudential measures to rein growth in mortgage indebtedness and because of further strengthening of

WWW.STANDARDANDPOORS.COM

self-regulatory measures to prevent excessive risk taking in mortgage financing. We recognize that house price growth have cooled down materially since 2014 with lending growth remaining at moderate levels. We also take some comfort, that very high mortgage debt level is mitigated by the large amount of financial assets, including pensions, held by households in Switzerland.

Our industry risk score of '2' primarily reflects the banking sector stability and a relatively high share of deposit funding. In our view, the Swiss regulator's regulatory initiatives are more stringent than those in other European banking industries. Banks' net interest margins continue to decline gradually, given the pressure on deposit margins from the negative yield environment. This is partly offset, however, by higher margins on lending products, fee income from investment advisory-related activities, and cost management. As a result, banks are able to generate returns on core banking products that are adequate to meet their cost of capital. We consider risk for Swiss banks from tech disruption as limited as of today, given the population's preference for cash payments, the small size of the market with few foreign banks, own regulatory framework, and technologically well-equipped banks.

Aargauische Kantonalbank--Key Figures --Year ended Dec. 31--(Mil. CHF) 2019* 2018 2017 2016 2015 Adjusted assets 28,588.0 28,348.6 26,959.1 25,243.6 24,284.5 Customer loans (gross) 23,051.6 22,876.3 20,952.3 19,898.9 21.914.3 Adjusted common equity 2,378.3 2,289.6 2,086.8 2,174.2 1,998.1 382.4 372.7 363.6 369.2 Operating revenues 190.6 Noninterest expenses 106.6 209.1 197.0 187.4 185.2 Core earnings 87.7 173.9 177.4 182.6 181.5

Table 1

*Data as of June 30. CHF--Swiss Franc.

Business position: Geographic and product concentration mitigated by stable business activity

We base our assessment of AKB's adequate business position on the bank's strong business stability, which offsets concentration risks arising from its focus on real estate lending in the Canton of Aargau. AKB's history of sound and sustainable profitability, prudent risk management, and cautious lending standards are fundamental to our business position assessment. Our assessment is further supported by customer loyalty instilled by the cantonal ownership and guarantee.

AKB is a midsize cantonal bank and ranks No. 7 out of a total of 24 cantonal banks in Switzerland (by total assets at year-end 2018) and operates in Northwest Switzerland, which is characterized by its strong small and midsize industrial sector.

Like most cantonal banks, AKB focuses mainly on its home canton and neighboring regions and is active primarily in residential mortgage lending (about 76% of the current loan book) and in financing local small and midsize enterprises. AKB's business activity also includes private-banking services to wealthy clientele in the canton.

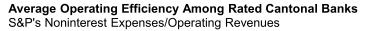
Unlike many other cantonal banks we rate, AKB faces a more difficult competitive environment in its core market because several other domestic and regional banks compete in the canton as well. AKB consequently holds a lower

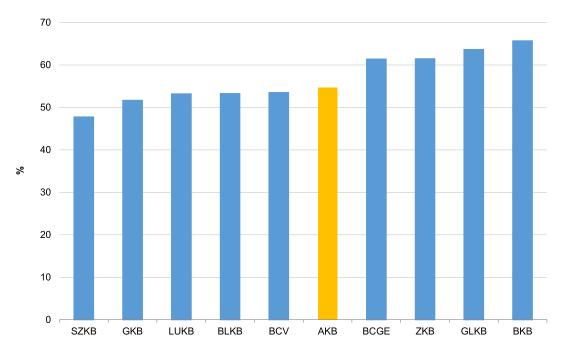
market share than other cantonal banks of approximately 20%. Still, we expect AKB will maintain or slightly expand its market leading position in Aargau over the next few years, building on its status as the cantonal bank.

The bank's geographic concentration in Aargau and neighboring regions exposes its business volumes and earnings to economic swings in a rather small economy. It is, however, located between the metropolitan areas of Basel and Zurich. Although we see risks arising from AKB's concentrated business position, we expect the bank will continue to post very sound and stable earnings in the coming years by keeping its focus on achieving appropriate risk-adjusted margins, rather than business volumes, with an exceptionally solid client base.

From 2015 to 2018, AKB's cost-to-income ratio weakened by around 5 percentage points to 55.9%, which is in line with other cantonal banks. This largely reflects additional investments into digitalization, culminating in a new department "digitalization & infrastructure", and is in line with the ownership strategy. The bank's reported cost-to-income ratio, which includes reversals of loan loss provisions as income, was 50.6% and remains in line with the long-term target of 50%-55%.

Chart 1





Source: S&P Global Ratings.

Copyright © 2019 by Standard & Poor's Financial Services LLC. All rights reserved.

We see the risk of disruption for AKB's business model from new Fintech competitors as relatively low in the foreseeable future, given a loyal and conservative client base, which will likely also favor a relationship-based bank over pure digital banks in the future. This provides time for AKB to gradually adjust its product offering and digital

WWW.STANDARDANDPOORS.COM

customer interaction.

Table 2

Aargauische KantonalbankBusiness Position								
		Year e	ended Dec	:. 31				
(%)	2019*	2018	2017	2016	2015			
Total revenues from business line (currency in millions)	191.3	388.7	378.9	371.1	412.0			
Commercial & retail banking/total revenues from business line	100.0	100.0	100.0	100.0	100.0			
Return on average common equity	6.0	6.2	6.5	6.6	7.7			

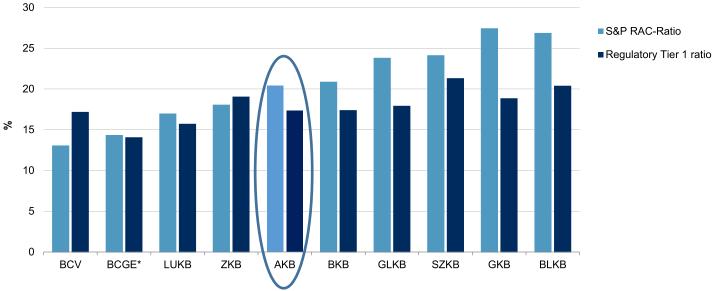
*Data as of June 30.

Capital and earnings: Very strong compared with that of global peers

We continue to view AKB's capital position as very strong, based on our projected risk-adjusted capital (RAC) ratio. At year-end 2018, our RAC ratio for AKB was at 20.4%, on the same level as one year before. The growth in risk-weighted assets from the growing mortgage book was offset by sufficient earnings retention. We expect this ratio to slightly increase, but to remain below 21% over the next 18-24 months.

The stability in capital ratios is supported by the bank's capital target of a 16% common equity tier 1 (CET1) ratio, which has been agreed with the canton. This regulatory ratio, where the countercyclical capital buffer is deducted from capital, was 17.4% at year-end 2018. Although we understand that this agreement is not binding, we expect that the canton would adjust its dividend requirement to allow AKB's CET1 ratio to stay in the target range of 15.8%-16.2%. It is noteworthy that AKB has not issued any hybrid securities, indicating the high quality of capital.

Chart 2



Exceptionally Strong Capitalization In Global Comparison But only average among Cantonal banks

*Ratios as of Dec 2017. Source: S&P Global Ratings. Copyright © 2019 by Standard & Poor's Financial Services LLC. All rights reserved.

In our view, AKB's earnings are predictable and stable. We forecast a stable net income of Swiss franc (CHF) 110-120 million (about €123 million) over 2019 to 2021. We expect continued pressure on the bank's net interest margin (NIM), largely offset by growing lending volumes. After reversals in loan-loss provisions over the past four years, we expect new credit losses to gradually normalize and increase to around 12bps of the mortgage book by 2021. Furthermore, we expect that the bank's flexible dividend policy, as agreed with the canton, will ensure a broadly stable capitalization.

We project continued pressure on risk-adjusted profitability and expect AKB's earnings buffer to drop below 1.0x from 1.04x in 2018, still broadly in line with that of its Swiss peers. This buffer, which measures a bank's capacity of preprovision operating income to cover normalized (annual average through the cycle) credit losses, would act as a first line of defense and covers 1% of RWAs beyond normalized losses in a potential macroeconomic stress scenario.

Table 3 Aargauische Kantonalbank--Capital And Earnings --Year ended Dec. 31--(%) 2019* 2018 2017 2016 2015 Tier 1 capital ratio N/A 17.4 17.1 17.2 S&P Global Ratings' RAC ratio before diversification N/A 20.4 20.4 20.5 S&P Global Ratings' RAC ratio after diversification N/A 16.7 16.6 16.6 Adjusted common equity/total adjusted capital 100.0 100.0 100.0 100.0 100.0 Net interest income/operating revenues 73.9 74.5 64.9 68.4

WWW.STANDARDANDPOORS.COM

NOVEMBER 7, 2019 7

17.1

20.1

18.3

68.6

© S&P Global Ratings. All rights reserved. No reprint or dissemination without S&P Global Ratings' permission. See Terms of Use/Disclaimer on the last page.

Table 3

Aargauische Kantonalbank--Capital And Earnings (cont.)

Year ended Dec. 31							
2019*	2018	2017	2016	2015			
17.8	17.1	16.7	16.2	16.4			
6.6	6.5	17.2	14.3	13.5			
55.9	54.7	52.9	51.5	50.2			
0.6	0.6	0.7	0.7	0.8			
0.6	0.6	0.7	0.7	0.8			
	17.8 6.6 55.9 0.6	2019* 2018 17.8 17.1 6.6 6.5 55.9 54.7 0.6 0.6	2019* 2018 2017 17.8 17.1 16.7 6.6 6.5 17.2 55.9 54.7 52.9 0.6 0.6 0.7	2019* 2018 2017 2016 17.8 17.1 16.7 16.2 6.6 6.5 17.2 14.3 55.9 54.7 52.9 51.5 0.6 0.6 0.7 0.7			

*Data as of June 30. N/A--Not applicable.

Table 4

Aargauische Kantonalbank--Risk-Adjusted Capital Framework Data

(Mil. CHF)	Exposure*	Basel III RWA	Average Basel III RW(%)	S&P Global Ratings RWA	Average S&P Global Ratings RW (%)
Credit risk					
Government & central banks	3,420.8	0.7	0.0	1.9	0.1
Of which regional governments and local authorities	0.0	0.0	0.0	0.0	0.0
Institutions and CCPs	1,668.7	469.8	28.2	318.4	19.1
Corporate	8,046.5	5,437.2	67.6	5,310.4	66.0
Retail	15,289.4	6,342.1	41.5	4,204.5	27.5
Of which mortgage	13,748.2	5,105.2	37.1	3,188.0	23.2
Securitization§	0.0	0.0	0.0	0.0	0.0
Other assets†	63.8	63.8	100.0	63.1	98.9
Total credit risk	28,489.2	12,313.6	43.2	9,898.3	34.7
Credit valuation adjustment					
Total credit valuation adjustment		68.0		0.0	
Market Risk					
Equity in the banking book	75.4	84.7	112.4	533.0	707.2
Trading book market risk		45.9		68.8	
Total market risk		130.6		601.8	
Operational risk					
Total operational risk		695.5		726.5	
	Exposure	Basel III RWA	Average Basel II RW (%)	S&P Global Ratings RWA	% of S&P Global Ratings RWA
Diversification adjustments					
RWA before diversification		13,207.5		11,226.5	100.0
Total Diversification/ Concentration Adjustments				2,495.2	22.2
RWA after diversification		13,207.5		13,721.6	122.2

WWW.STANDARDANDPOORS.COM

Table 4

Aargauische Kantonalbank--Risk-Adjusted Capital Framework Data (cont.)

	Tier 1 capital	Tier 1 ratio (%)	Total adjusted capital	S&P Global Ratings RAC ratio (%)
Capital ratio				
Capital ratio before adjustments	2,292.4	17.4	2,289.6	20.4
Capital ratio after adjustments‡	2,292.4	17.4	2,289.6	16.7

*Exposure at default. §Securitization Exposure includes the securitization tranches deducted from capital in the regulatory framework. †Exposure and S&P Global Ratings' risk-weighted assets for equity in the banking book include minority equity holdings in financial institutions. ‡Adjustments to Tier 1 ratio are additional regulatory requirements (e.g. transitional floor or Pillar 2 add-ons). RWA--Risk-weighted assets. RW--Risk weight. RAC--Risk-adjusted capital.CHF -- Swiss Franc. Sources: Company data as of 'Dec. 31 2018', S&P Global Ratings.

Risk position: Concentration in residential mortgage lending, but strong risk metrics

We regard AKB's risk position as adequate. We think that the asset quality of AKB's loan portfolio is high, despite its inherent concentrations. We base our view on AKB's prudent risk management and lending standards, which we consider to be more comprehensive than those of competitors in the Swiss market.

We expect that loan book growth will slow slightly, because management is putting more emphasis on risk-adjusted margins rather than volume growth. AKB's mortgage loan portfolio represents more than 94% of the loan book and consists mostly of residential real estate loans (80% of total loans). It is very granular, highly collateralized, and its average loan-to-value ratio was 62% at year-end 2018.

Due to AKB's focus on mortgage lending, we think that the housing price increases in Switzerland over the past several years will likely heighten the risks of correction and subsequently could hamper AKB's currently sound asset quality. At the same time, we acknowledge that residential real estate price increases in Aargau have been lower than the Swiss average and that growth rates have reduced to a more sustainable level of 0.6% in 2018, with growth rates expected to remain around 2% per year for 2020 and 2021. However, the Aargau housing market may not be able to fully delink itself from the developments in the national housing market.

We generally view commercial lending as riskier than residential real estate loan business. Nevertheless, we believe the quality of AKB's commercial loan portfolio to be very sound because exposure to cyclical and riskier sectors, such as tourism or real estate development, is modest. The portfolio is collateralized by real estate to a large extent. Nevertheless, we expect that the commercial lending exposes AKB to higher credit losses in a recessionary scenario than its retail business.

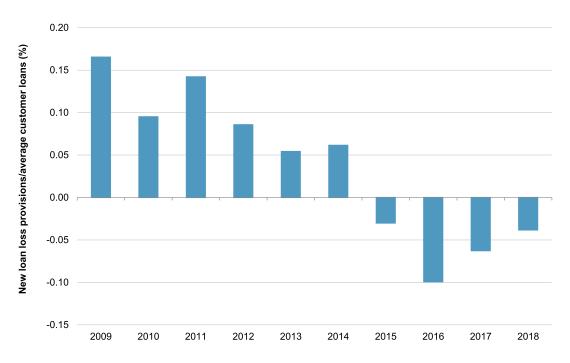
Positively, we believe that the bank will maintain its conservative underwriting standards in new mortgage lending, helping it to keep a marginal level of nonperforming loans (NPL) in its loan book. We note that the NPL ratio of 0.7% as of end 2018 is based on AKB's disclosure of loans at risk ("gefährdete Forderungen"), which is more conservative than 90 days past due, which we usually reference.

WWW.STANDARDANDPOORS.COM

Chart 3

Historically Low Credit Losses

Annual reversals even exceeding new loan loss provisions since 2015



Source: S&P Global Ratings.

Copyright © 2019 by Standard & Poor's Financial Services LLC. All rights reserved.

AKB makes negligible use of complex products because it is dedicated to the local market and operates only with standard products. AKB's loan book consists mainly of longer-term fixed-rate loans, which are largely funded by shorter-term savings deposits. This exposes the bank to interest rate risks, which are adequately hedged, in our view. Risks from trading activities are very limited, since these are generally client initiated.

Table 5

Aargauische KantonalbankRisk Position								
	Year ended Dec. 31							
(%)	2019*	2018	2017	2016	2015			
Growth in customer loans	1.5	4.4	4.6	5.3	3.5			
Total diversification adjustment/S&P Global Ratings' RWA before diversification	N/A	22.2	23.3	23.4	10.0			
Total managed assets/adjusted common equity (x)	12.0	12.4	12.4	12.1	12.2			
New loan loss provisions/average customer loans	(0.1)	(0.0)	(0.1)	(0.1)	(0.0)			
Net charge-offs/average customer loans	N.M.	0.0	0.0	0.0	0.0			
Gross nonperforming assets/customer loans + other real estate owned	N/A	0.7	0.8	1.0	1.4			
Loan loss reserves/gross nonperforming assets	N/A	50.3	50.9	53.4	45.8			

*Data as of June 30. N/A--Not applicable. N.M.--Not meaningful.

WWW.STANDARDANDPOORS.COM

Funding and liquidity: Stable funding base, owing to a strong retail franchise

AKB's funding is average and in line with our BICRA score of '2' for systemwide funding in Switzerland. The bank's liquidity is strong, in our opinion. Both assessments reflect the stability we consider AKB enjoys, based on the guarantee provided by the canton.

The bank's core customer deposits accounted for 71% of its funding base and 81% of its loan portfolio as of June 2019. In addition, it has a comparably large equity position on its balance sheet of 8.3% of total assets. Due to the cantonal guarantee, we expect AKB's customer deposits will remain very stable, also in times of stress. That said, we expect customer loans will continue to exceed customer deposits, with the ratio staying between 125% and 130%, which indicates AKB's dependency on other means of funding.

These additional sources of AKB's funding mix are divided between capital market funding, via secured and unsecured instruments and interbank funding.

We expect AKB's stable funding ratio--S&P Global Ratings' measure of available long-term funding relative to long-term funding needs--will remain around 110% over the next few years, broadly comparable with metrics of other rated cantonal banks.

Our strong liquidity assessment reflects that AKB's broad liquid assets covered its short-term wholesale funding needs by 2.1x as of June 2019, implying that it is able to operate for more than 12 months with no access to market funding.

This level of liquid assets to short-term liquidity needs is in line with that of most other rated cantonal banks.

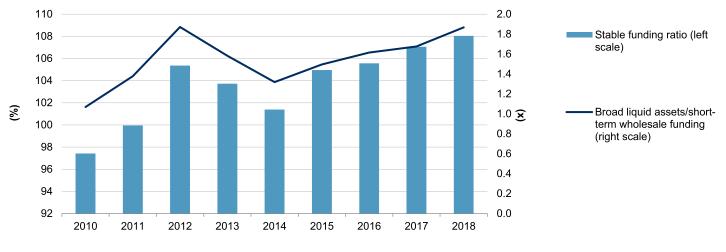
Furthermore, the excess of broad liquid assets over short-term wholesale funding still covers about 13% of the short-term customer deposits as of June 2019. Notably, the regulatory liquidity coverage ratio that is based on the 30-day time horizon has further increased to 130% as of year-end 2018, from 120% a year before.

We also see proper governance in place to prevent any funding concentrations, and regular stress testing. While we observe some funding in U.S. dollar or euro, we do not see materially increased risk in its funding profile.

Chart 4

Stable Funding Profile

And strong liquidity ratios



Source: S&P Global Ratings.

Copyright © 2019 by Standard & Poor's Financial Services LLC. All rights reserved.

Owing to AKB's close ties with, and the statutory guarantee by, the canton, we believe that the bank would not be exposed to large withdrawals of customer deposits in times of stress. On the contrary, during the most recent financial crisis, we observed a flight to quality that has strengthened AKB's funding and liquidity profile. Nevertheless, AKB also considers severe idiosyncratic stress in its stress testing.

Table 6

Aargauische KantonalbankFunding And Liquidity								
	Year ended Dec. 31							
(%)	2019*	2018	2017	2016	2015			
Core deposits/funding base	71.5	70.8	70.8	71.5	71.9			
Customer loans (net)/customer deposits	124.0	124.9	126.1	127.8	125.6			
Long-term funding ratio	92.3	91.3	90.3	91.0	89.6			
Stable funding ratio	108.8	108.0	107.0	105.5	104.9			
Short-term wholesale funding/funding base	8.4	9.4	10.6	9.8	11.4			
Broad liquid assets/short-term wholesale funding (x)	2.1	1.9	1.7	1.6	1.5			
Net broad liquid assets/short-term customer deposits	13.1	12.0	10.6	8.8	8.2			
Short-term wholesale funding/total wholesale funding	29.6	32.4	36.2	34.5	40.5			
Narrow liquid assets/3-month wholesale funding (x)	3.2	2.9	2.8	2.6	2.1			

*Data as of June 30.

External support: Extremely high likelihood of extraordinary support

We consider AKB to be a GRE, given its full ownership by the Canton of Aargau and our expectation of an extremely high likelihood of timely and sufficient extraordinary government support from its owner in the event of stress. We

reflect this in the long-term rating on AKB that is two notches higher than its SACP.

The AKB law stipulates the cantonal ownership and guarantee, as well as the objectives of the bank to foster local economic and social development. The close engagement of the canton in the bank's implementation of its public policy role and strategy setting, as well as its close control of the bank, in our view ensures an integral link between the bank and the canton.

We think a potential default of AKB would have a significant systemic impact on the local economy, which demonstrates the bank's very important role for the canton, and further incentivizes support mechanisms for the bank in case it encounters financial distress.

We expect the existing cantonal guarantee to remain in place in the medium term. Although outside our outlook horizon, we see a potential risk that future agreements between Switzerland and the EU regarding preferential market access for Switzerland might include the removal of remaining guarantees for all cantonal banks.

Additional rating factors: None

No additional factors affect our rating on AKB.

Related Criteria

- Criteria Financial Institutions General: Risk-Adjusted Capital Framework Methodology, July 20, 2017
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- Criteria Financial Institutions Banks: Bank Rating Methodology And Assumptions: Additional Loss-Absorbing Capacity, April 27, 2015
- General Criteria: Rating Government-Related Entities: Methodology And Assumptions, March 25, 2015
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- Criteria Financial Institutions Banks: Quantitative Metrics For Rating Banks Globally: Methodology And Assumptions, July 17, 2013
- Criteria Financial Institutions Banks: Banking Industry Country Risk Assessment Methodology And Assumptions, Nov. 9, 2011
- Criteria Financial Institutions Banks: Banks: Rating Methodology And Assumptions, Nov. 9, 2011
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009

Related Research

- Swiss Canton of Aargau Affirmed At 'AA+/A-1+'; Outlook Stable; July 19, 2019
- Banking Industry Country Risk Assessment: Switzerland, Nov. 30, 2018

WWW.STANDARDANDPOORS.COM

Anchor Matrix										
Industry		Economic Risk								
Risk	1	2	3	4	5	6	7	8	9	10
1	а	а	a-	bbb+	bbb+	bbb	-	-	-	-
2	а	a-	a-	bbb+	bbb	bbb	bbb-	-	-	-
3	a-	a-	bbb+	bbb+	bbb	bbb-	bbb-	bb+	-	-
4	bbb+	bbb+	bbb+	bbb	bbb	bbb-	bb+	bb	bb	-
5	bbb+	bbb	bbb	bbb	bbb-	bbb-	bb+	bb	bb-	b+
6	bbb	bbb	bbb-	bbb-	bbb-	bb+	bb	bb	bb-	b+
7	-	bbb-	bbb-	bb+	bb+	bb	bb	bb-	b+	b+
8	-	-	bb+	bb	bb	bb	bb-	bb-	b+	b
9	-	-	-	bb	bb-	bb-	b+	b+	b+	b
10	-	-	-	-	b+	b+	b+	b	b	b-

Ratings Detail (As Of November 7, 2019)*

Aargauische Kantonalbank								
Issuer Credit Rating	AA/Stable/A-1+							
Issuer Credit Ratings History								
24-Jul-2018	AA/Stable/A-1+							
26-Jul-2016	AA+/Negative/A-1+							
01-Dec-2014	AA+/Stable/A-1+							
Sovereign Rating								
Switzerland	AAA/Stable/A-1+							
Related Entities								
Aargau (Canton of)								
Issuer Credit Rating	AA+/Stable/A-1+							
Senior Unsecured	AA+							
C	AA+							

*Unless otherwise noted, all ratings in this report are global scale ratings. S&P Global Ratings' credit ratings on the global scale are comparable across countries. S&P Global Ratings' credit ratings on a national scale are relative to obligors or obligations within that specific country. Issue and debt ratings could include debt guaranteed by another entity, and rated debt that an entity guarantees.

Copyright © 2019 Standard & Poor's Financial Services LLC. All rights reserved.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. S&P's opinions, analyses and rating acknowledgment decisions (described below) are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives. Rating-related publications may be published for a variety of reasons that are not necessarily dependent on action by rating committees, including, but not limited to, the publication of a periodic update on a credit rating and related analyses.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P reserves the right to assign, withdraw or suspend such acknowledgment at any time and in its sole discretion. S&P Parties disclaim any duty whatsoever arising out of the assignment, withdrawal or suspension of an acknowledgment as well as any liability for any damage alleged to have been suffered on account thereof.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

S&P may receive compensation for its ratings and certain credit-related analyses, normally from issuers or underwriters of securities or from obligors. S&P reserves the right to disseminate its opinions and analyses. S&P's public ratings and analyses are made available on its Web sites, www.standardandpoors.com (free of charge), and www.ratingsdirect.com and www.globalcreditportal.com (subscription), and may be distributed through other means, including via S&P publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.