A look behind the recommendations of Zürcher Kantonalbank's Research

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Zürcher Kantonalbank

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Preface

Credibility, integrity and specialist knowledge are the capital on which we financial analysts rely. Independence is another prerequisite for an objective financial analysis in the service of our clients. And in order to be verifiable and therefore credible to you, our clients, transparency with regard to our performance is equally indispensable.

Our brochure is dedicated to this objective. It is intended to provide a brief and concise outline of the philosophy of Zürcher Kantonalbank's Research regarding recommendations. With this publication we also fulfil the requirements of the SBA Directive of 1 July 2003 (revised as of 1 July 2008) on the independence of analysts.

Sven Bucher
Head of Research
Zürcher Kantonalbank

Part 1

General remarks

Independence and integrity

- The ZKB Research acts independently and puts customer needs first. This is ensured by the research process, the people involved and the organisational structure
- Independent of capital market interests
- Analysts are not remunerated on a commission basis
- No proprietary trading of shares, bonds, derivatives, etc. in the companies covered by the relevant analyst. Proprietary trading in Swiss companies is generally only possible for SLI (Swiss Leader Index) shares
- Bond ratings based on presence in the capital market (no mandate as with S&P etc.)
- Continuous performance measurement* of stock recommendations (this is part of the assessment system for the individual analysts)

* until 2013 by the independent institution isfa and since then according to the isfa methodology

What is the basis of our recommendations?

Independence

– Functional, hierarchical and remuneration-related independence of Research from other departments (in accordance with SBA guidelines)

Fundamentales Research

– Detailed knowledge of the companies/industries covered
– Various valuation methods
– "Recognised" rating models
– Permanent market observation
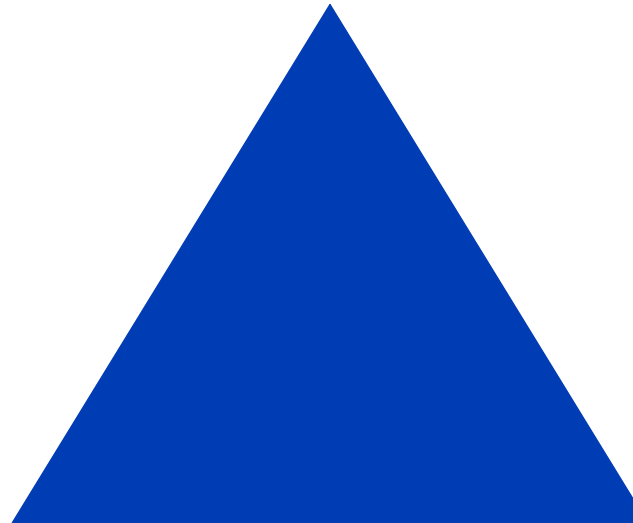
Cooperation/synergies

– Close cooperation between equity and bond analysts
– Access to in-house expertise in macro research and investment strategy

Part II

Stock recommendations

Stock A or B?
In the beginning there is the investment strategy

Investment strategy

– The investor defines his or her investment strategy

– The investment strategy is based on client needs (e.g. time horizon, asset size, risk capacity) and shapes the asset allocation

   – Asset allocation: Distribution of assets to the major asset classes such as equity, bonds, liquidity or alternative investments (e.g. real estate, hedge funds)

   – The investment strategy determines whether an investor should have e.g. equity and how high the equity quota should be

– The investor should not judge stock recommendations in an isolated manner but within the framework of the chosen strategy

– The stock selection serves to "refine" the strategic or tactical equity quota

How do our recommendations come about?
Qualitative decision-making factors

"Trigger"
- Turnaround story
- M&A target
- Change in strategy/management

Accounting
- Transparency
- "True and fair"
- Balance sheet quality
- Profitability

Market position
- Market leader
- Cost leader
- Quality leader
- Innovator

Management
- Reliability
- Consistency/track record
- Credibility
- Corporate governance

Market trends
- Sector rotation
- Trends in investor behaviour
- Market psychology

The weightings of the decision factors are subject to the phase the company and the stock market are in

How do our recommendations come about?
Quantitative valuation models

Earnings model

– Economic scenarios (regarding e.g. GDP, inflation, exchange rate assumptions) based on analyses performed by the macroeconomic analysts of Zürcher Kantonalbank
– Sector-specific developments: Supply, demand, competitors, suppliers, legislation/policy, new technologies etc.
– All relevant figures in the income statement, balance sheet and cash flow statement are estimated over a time horizon of at least 5 years
– These figures then serve as input for the valuation models (see below)

More complex / absolute valuation models

– DCF model: enterprise value = sum of discounted free cash flows
– DDM model: enterprise value = sum of discounted dividends
– SotP: enterprise value = sum of the individual parts of a company

Simple/relative valuation and comparison key figures

– Price-earnings ratio (P/E ratio), price-cash flow ratio (P/CV ratio)
– Price/book value ratio (P/B ratio)
– PEG ratio (price-to-earnings growth ratio)
– EV/EBITDA ratio (enterprise value in relation to earnings before interest, taxes, depreciation and amortisation)

Methods of stock/enterprise valuation

Relative valuation methods

Statistical "multiples"	**Simple multiples**	– P/E, P/CF, P/B etc.
		– EV/EBITDA
		– EV/sales
	Growth multiples	– PEG (P/E/EPSg5Y), PCFg

Comparison of these figures with the peer group,
in a historical context or to the overall market

Methods of stock/enterprise valuation

Absolute valuation methods

Dynamic (Time value of money)	**DCF** →	Enterprise value = sum of discounted FCF
	DDM →	Enterprise value = sum of discounted dividends
Absolute value corresponds with discounted cash flows		
	SotP →	Enterprise value = sum of the individual parts (SotP)

Zürcher Kantonalbank Research
Relative recommendations as standard

– We analysts at Zürcher Kantonalbank are convinced that we can generate added value compared to a passive approach. Our track record confirms this.

– Our approach: Relative recommendations versus a benchmark (in Switzerland: SPI). The expected relative performance is the anticipated total return over the next 12 months, which is made up of the share price performance (price gain or loss) plus distributions (e.g. dividends).

– **Market Perform:** Over the next twelve months, the share should perform roughly in line with the market/benchmark

– **Underperform:** Over the next twelve months, the share will likely perform less strongly than the market/benchmark

– **Outperform:** Over the next twelve months, the share is expected to perform better than the market/benchmark

Zürcher Kantonalbank Research
Relative recommendations as standard

How much out- or underperformance?

– The over- or underperformance we expect from a share with an according rating cannot be quantified uniformly as it depends on the risk level of the stock.

– The riskier a stock, the more outperformance it must deliver (and vice versa).

– On average: +/– 5% expected outperformance or underperformance corresponds to a "Market Perform" rating.

A large number of factors can influence the price performance and cause the development to deviate from the forecast.

– Exchange rate fluctuations, changes in management, economic factors, regulatory changes, competitive situation, technical problems with products, changes in demand, problems with input materials/commodities, operational incidents, M&A etc.

– This list is not exhaustive.

Accordingly, the rating and the relative upside potential may change at any time if new information becomes available.

What recommendation lists does the ZKB Research maintain? Systematic consolidation of expertise

Switzerland: about 130 large, small and mid-caps

International: large caps and usually industry leaders

Model portfolios

Research Universe (about 250 shares)

Research Universe
In-depth, active analysis/valuation and explicit recommendations. Relative ratings.

From ratings to sample portfolios
Sample portfolios – an additional recommended list with a limited number of stocks

Rating: Outperform	Model Portfolio International	– Variable number of shares (16 to 20), usually only stocks with an "Outperform" rating – Benchmark = MSCI USA and the MSCI Europe ex Switzerland, each with a 50% weighting
Rating: Market Perform	Model Portfolio Switzerland Large-Caps	– 10 stocks – Benchmark SLI
Rating: Underperform	Model Portfolio Switzerland Small and Mid-Caps	– 10 stocks – Benchmark SPI ex SLI

Stock recommendations with added value

	p.a. since 2005	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
■ ZKB Research	9.26	31.20	-9.64	21.87	2.59	4.89	12.69	25.64	19.79	-8.12	7.54	26.57	-34.56	3.47	24.16	36.16
■ SPI (Total return)	7.68	30.59	-8.57	19.92	-1.41	2.68	13.00	24.60	17.72	-7.72	2.92	23.18	-34.05	-0.05	20.67	35.61
Alpha	1.59	0.61	-1.07	1.95	4.00	2.22	-0.31	1.04	2.07	-0.40	4.62	3.39	-0.51	3.53	3.49	0.55
Inform. Ratio	1.19	0.45	-0.77	2.07	3.47	1.52	-0.35	1.23	2.06	-0.28	3.08	2.11	-0.20	1.99	3.15	0.68
No. stocks covered		133	129	125	122	126	122	121	122	117	124	121	117	120	120	113

Source: Zürcher Kantonalbank / ISfA until 2013

The Research Universe in the spotlight
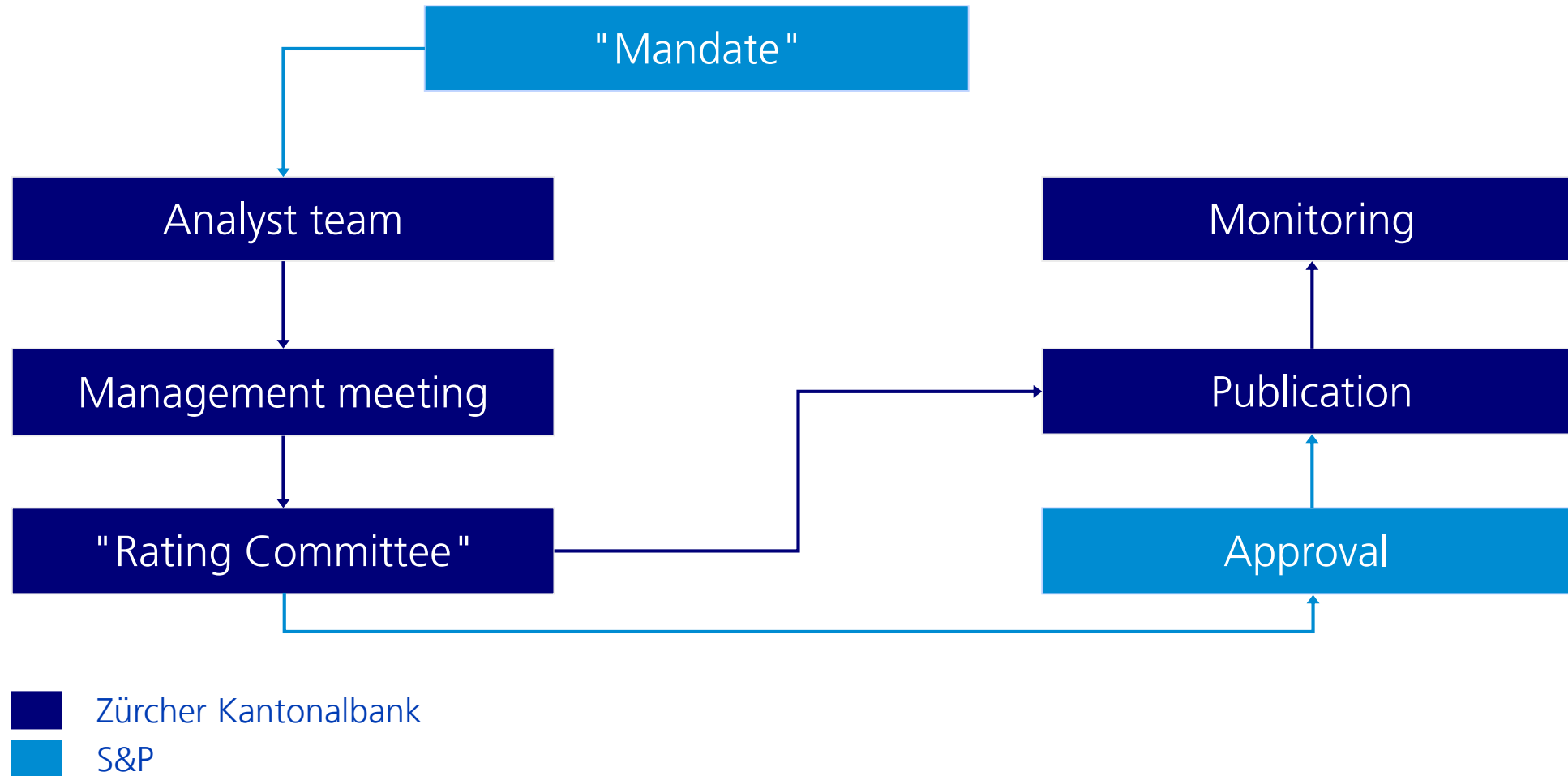## Principles of coverage

Disclosure
All studies disclose whether Zürcher Kantonalbank holds a stake in the company, has been involved in a capital market transaction in the last 12 months and whether the analyst holds the share.

Continuity
All stocks in the Research Universe are continuously covered. Removals from and additions to the Research Universe are communicated.

Market and sector comparison
The most important valuation ratios are regularly calculated for all securities and markets and, where appropriate, sector comparisons are made.

Long-term approach
For all stocks in the Research Universe all important key data (sales, profits, dividends etc.) are estimated for the future.

Research Universe

Transparency
As a rule, the studies disclose the valuation approaches used and describe possible risks.

News comments
For all shares in the Research Universe, important news is commented on promptly (via Zürcher Kantonalbank publications) and integrated into the estimates, valuations and ratings.

Database
The most important data are managed in a uniform database.

Part III

Bond ratings

Bond research
Rating process of Zürcher Kantonalbank


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                    "Mandate"

Analyst team                          Monitoring

Management meeting                    Publication

"Rating Committee"                    Approval
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■ Zürcher Kantonalbank
■ S&P

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Source: Own illustration; credit assessments (ratings) of Zürcher Kantonalbank may not be sent to recipients in the EEA

Bond research
Rating process – criteria

Different rating models

Private-law companies = issuers under private law

Criteria:

1. Business risk (qualitative factors)

2. Financial risk (quantitative factors)

Regional public authorities = public-law debtors
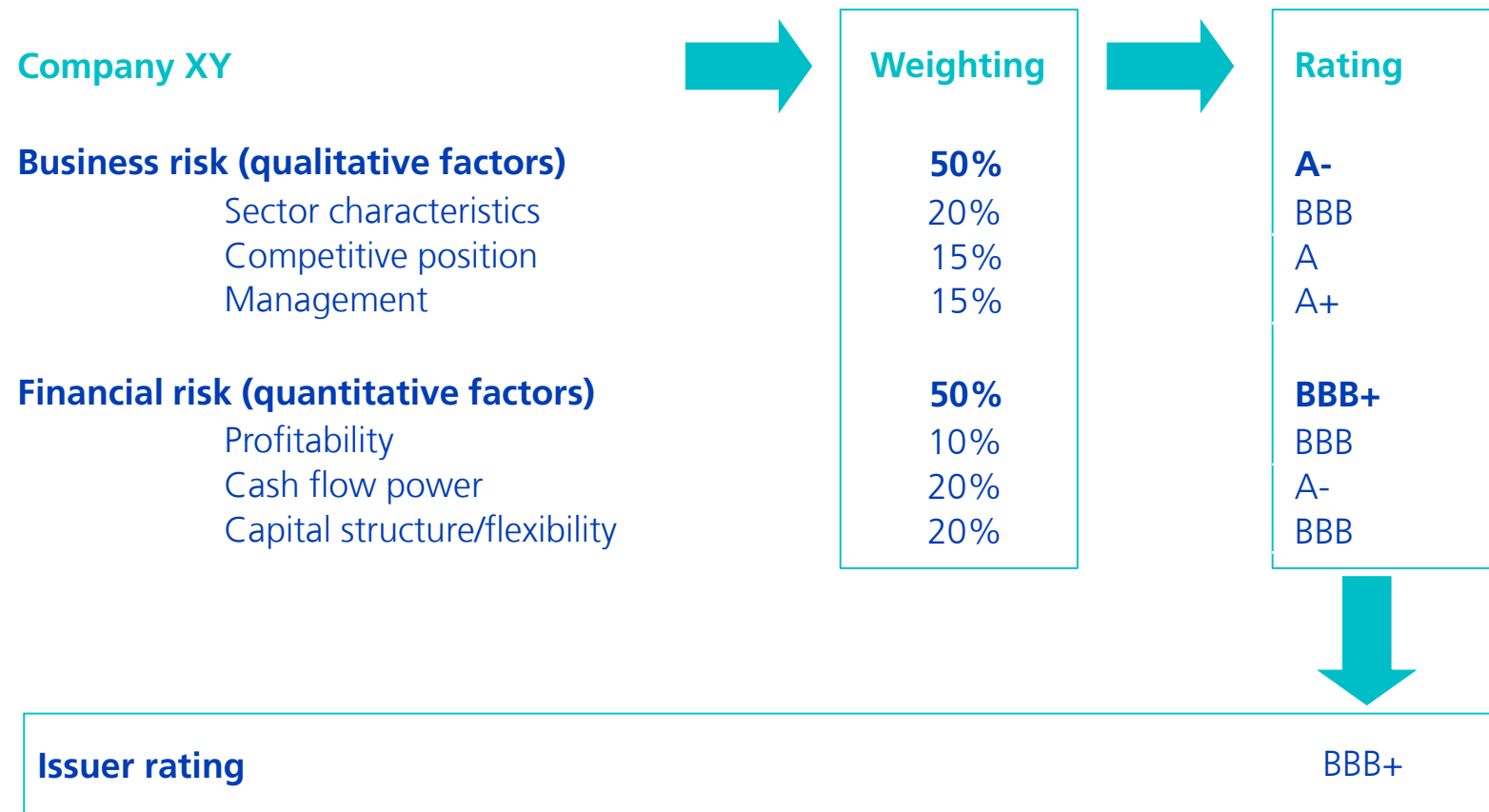
Criteria:

1. Economic strength

2. Current account statement

3. Legacy liabilities

Rating process: issuers under private law
Industrial company (fictitious example)

Subratings and their weightings

Company XY	Weighting	Rating
Business risk (qualitative factors)	**50%**	**A-**
Sector characteristics	20%	BBB
Competitive position	15%	A
Management	15%	A+
Financial risk (quantitative factors)	**50%**	**BBB+**
Profitability	10%	BBB
Cash flow power	20%	A-
Capital structure/flexibility	20%	BBB

Issuer rating	BBB+

Rating process: industrial company (fictitious)
Valuation of business risks

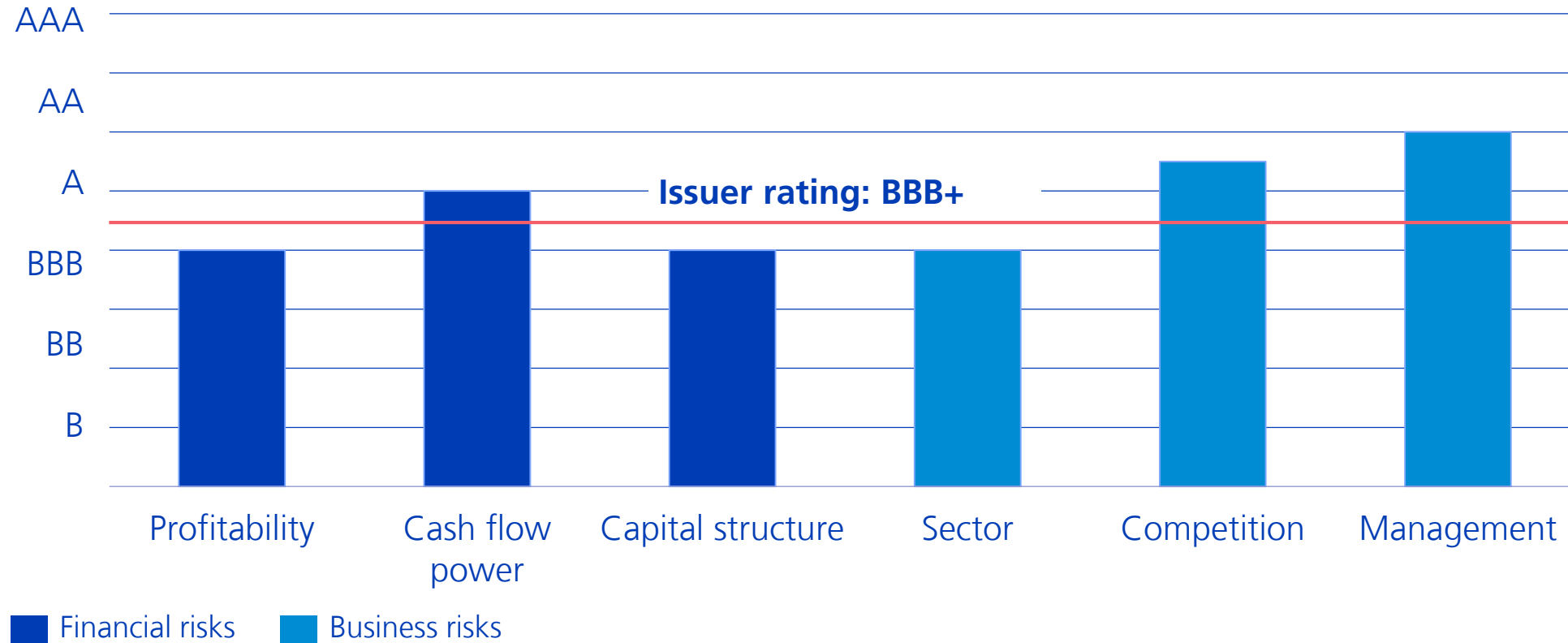| Sector characteristics	Weighting 20%	Degree of fulfilment 62%	Rating BBB
Competitive situation	4.0%	50%	BB+
Resistance to business cycles	4.0%	50%	BB+
Growth opportunities	4.0%	65%	BBB
Technological vulnerability	4.0%	65%	BBB
Government regulations	4.0%	80%	A
Competitive position	**15%**	**77%**	**A**
Market share	3.8%	85%	A+
Technology	3.8%	85%	A+
Diversification - geographic	3.8%	70%	BBB+
Diversification - products	3.8%	69%	BBB+
Management	**15%**	**83%**	**A+**
Corporate strategy	3%	86%	AA-
Industry experience	3%	86%	AA-
Credibility	3%	80%	A
Consistency	3%	80%	A
Risk tolerance	3%	85%	A+
Total business risk	**50%**	**73%**	**A-**

Rating process: industrial company (fictitious)
Evaluation of financial risks

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Weighting 10%	Deg. fulfilment 60%	Rating BBB
Profitability																
EBIT margin (in %)	4.1	2.3	-2.9	5.3	6.8	8.1	7.2	3.0	-6.9	5.2	6.6	6.1	6.4	3.0%	60%	BBB
EBITDA margin (in %)	9.3	8.0	8.7	10.7	10.9	11.7	10.8	8.7	3.6	9.5	10.4	9.7	10.2	3.0%	60%	BBB
ROA (EBIT/total eq., in %)	4.4	2.6	-3.2	5.9	8.2	10.2	9.6	4.1	-7.0	6.3	8.0	7.6	7.6	2.0%	60%	BBB
ROE (net profit/EqC, in %)	6.2	-1.8	-14.8	9.6	13.9	17.3	15.5	3.8	-19.2	9.6	13.7	9.9	11.5	2.0%	60%	BBB
Cash flow power														**20%**	**66%**	**BBB+**
Operating cash flow (in mn)	489	383	413	584	75	444	516	197	242	243	250	229	374	10%	66%	BBB+
Free cash flow (in mn)	-7	306	272	432	-100	298	185	-197	94	150	103	19	224	10%	66%	BBB+
Capital structure/flexibility														**20%**	**69%**	**BBB+**
Current ratio (in %)	165	150	169	158	192	198	186	177	145	188	182	189	208	4%	66%	BBB+
EqC ratio (in %)	29	34	31	32	39	45	45	43	40	40	42	44	43	4%	71%	A-
Gearing	1.1	1.0	1.0	0.7	0.5	0.2	0.3	0.4	0.4	0.3	0.2	0.2	0.2	4%	71%	A-
Net Debt/EBITDA	3.2	3.9	3.4	1.9	1.5	0.7	1.0	1.4	4.5	1.0	0.8	0.9	0.6	4%	66%	BBB+
Inter. cover. (EBITDA/net.int.)	5.2	3.8	3.9	7.0	8.4	14.4	12.1	10.5	3.0	8.4	10.4	10.3	11.1	4%	71%	A-
Further key figures																
Sales (in mn)	3848	3417	3257	3540	3692	4048	4497	4465	2906	3447	3511	3602	3500			
Net profit (in mn)	65	-20	-147	94	155	229	232	56	-238	108	168	127	147			
Net debt (in mn)	1134	1077	962	725	606	324	499	546	472	321	294	302	204			
Total financial risk														**50%**	**66%**	**BBB+**

Rating process: industrial company (fictitious)
Overview of rating factors

Issuer rating: BBB+

Rating scale (y-axis): AAA, AA, A, BBB, BB, B

Categories (x-axis): Profitability, Cash flow power, Capital structure, Sector, Competition, Management

Legend:
- ■ Financial risks
- ■ Business risks

Rating process: regional public authorities

Three valuation dimensions

1. Economic strength

3. Legacy liabilities

Financial strength
Population
Quality assessment

Total debt
Interest charge
Debited interest ratio

Primary balance

Pension fund

Funding balance
Self-financing ratio
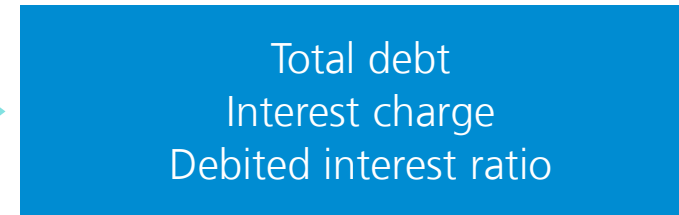
2. Current account statement
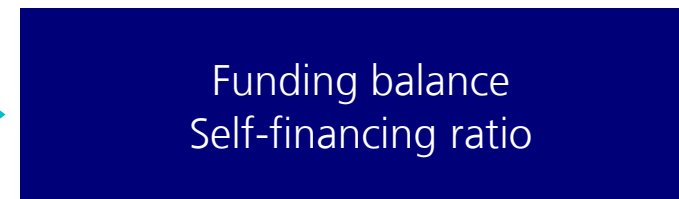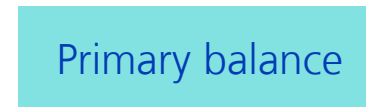
Inclusion of ratings from other rating agencies

–   Ratings for Swiss issuers (primary analysis) are based on our own analyses.

–   Ratings for foreign issuers (secondary analysis) are based on information from Standard & Poor's and Moody's, with the ZKB Bond Research team carrying out further analyses on a case-by-case basis.

–   Rating changes (ZKB's, Standard & Poor's and Moody's) are commented on continuously by ZKB's bond research department.

Contact

We are happy to help you with any questions you may have

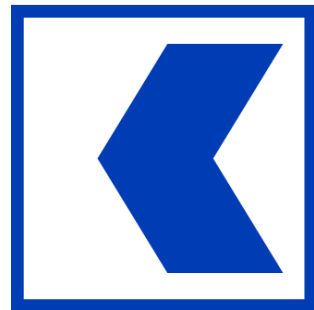E-mail: ZKB-Anlagepublikationen@zkb.ch

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