Securities Industry
Credit Rating Methods and Models
(PJFM-JR-ZQ-2024-V1.0)

安融(香港)信用評級有限公司
ANRONG(HONG KONG)CREDIT RATINGS COMPANY LIMITED

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This document is translated from the Rating Methodology for Sovereign published on November 28, 2024. In case of any discrepancies or inconsistencies between the English and Chinese versions, the English version shall prevail.

Rating Methodology

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I. Overview

AnRong (Hong Kong) Credit Ratings Company Limited (ARHK) has developed the "Securities Industry Credit Rating Methods and Models (PJFM-JR-ZQ-2024-V1.0)" (referred to as “this methodology and model”) to enhance the consistency, accuracy, and stability of rating methodologies, models, and rating results, in accordance with relevant laws, regulations, and the provisions of ARHK’s rating business-related management systems.

This methodology and model determines the rating benchmark for rated entities by combining sovereign risk adjustment factors, which, along with inherent adjustment factors, lead to the BCA grade for the rated entity. The BCA grade, combined with external support, produces the final credit rating of the rated entity. Specifically, ARHK first constructs a "Regional Strength and Industry Risk" dimension by fully considering the macro and regional strength and industry risks of the securities industry. Then, it constructs an "Operational and Financial Risk" dimension by considering the corporate strength and operational risk, capital adequacy, corporate financial risk, and corporate profitability. The Pre-SRAF rating level of the rated entity is derived from a two-dimensional matrix mapping of "Regional Strength and Industry Risk" and "Operational and Financial Risk." The sovereign risk adjustment factors are then used to determine the rating criteria for the rated entities, which are subsequently combined with self-adjustment factors to derive the BCA grade of the rated entities. Finally, the rated entity’s credit rating (Model Result Grade) is obtained by considering external support.

In terms of grade symbols, the BCA grades are represented by a sequence of symbols ranging from “aaa” to “c.” Except for “aaa” and grades below “cc” (inclusive), each credit grade can be fine-tuned with “+” or “-” symbols to indicate a slightly higher or lower credit level than the base grade. The final credit grade symbols correspond to a sequence from “AAA” to “C.” Similarly, except for “AAA” and grades below “CC” (inclusive), each credit grade can be fine-tuned with “+” or “-” symbols.

This methodology and model will become effective from December 16, 2024.

II. Scope of Application

ARHK defines the standards for rated entities in the securities industry as follows:

(1) The rated entity primarily engages in securities company business.

(2) The rated entity's revenue or profit mainly comes from securities company business.

(3) If the above two conditions are not met, but a comprehensive examination of the company's business model, asset structure, revenue, and profit structure indicates that the company clearly conforms to the operational characteristics of the securities industry, we will also classify it as a securities company.

III. Basic Assumptions

1. Assumption of Debt Repayment Environment Stability

ARHK assumes that the macroeconomic environment, industry competition environment, regulatory environment, legal environment, and financial market environment will not experience unexpected changes, and there will be no irresistible factors such as natural disasters or wars.

2. Assumption of Operational Stability

ARHK assumes that the rated entity is in a stable and continuous operational state, with coherent operational and financial data, and that historical data can serve as a basis for predicting future operations; that is, in the foreseeable future, there will not be significant changes in the rated entity's ongoing viability based on the macroeconomic environment, industry competition environment, regulatory environment, legal environment, and financial market environment, and that there will be no sudden operational changes or unannounced significant sudden changes, including but not limited to sudden changes in the nature of the rated entity, mergers and acquisitions, debt restructurings, significant asset changes, major regulatory penalties, defaults, bankruptcies, and other significant negative events.

3. Assumption of Data Authenticity

ARHK assumes that the data obtained through public authoritative channels and the data provided by the rated entity (including but not limited to data prepared by the rated entity, data provided by third-party intermediary institutions commissioned for rating objects, and data issued by other professionally recognized institutions for rating objects) are all authentic, legal, complete, and valid, without malicious embellishment or forgery, and without significant misleading statements.

4. Assumption of No Difference in Debt Repayment Willingness

ARHK assumes that the rated entity has the same willingness to repay similar debts and has not set repayment priority arrangements for similar debts.

IV. Characteristics of Credit Risk

ARHK believes that the credit risks in the securities industry mainly include the following aspects:

1. Policy Risk

Policy risk mainly arises from significant changes in government policies related to the securities market or the introduction of important measures and regulations that may lead to fluctuations in the securities market, thus directly affecting the operations of securities companies and the interests of investors. Policy risks mainly include market access, business scope, regulatory requirements, and tax policies.

2. Cyclical Fluctuation Risk

Securities companies are core participants in the capital market, serving as a bridge connecting investors and the capital market. Their brokerage, investment banking, proprietary trading, asset management, and innovative businesses are closely linked to the fluctuations of the securities market, which are tightly correlated with economic cycles. The cyclical expansion and contraction of the economy directly impact the trends in the securities market. Factors such as macroeconomic conditions, market trends, policy adjustments, interest rate changes, international economic conditions, global financial markets, and investors have cyclical effects on the securities market, leading to significant uncertainty and strong cyclical volatility, which in turn affects the operating performance and profitability of securities companies.

3. Concentration Risk

The concentration risk of securities companies refers to potential risks arising from excessive concentration in certain business areas or markets. This risk may stem from business concentration, client concentration, and geographic concentration. If a securities company is overly concentrated in certain areas or markets, it may face substantial losses if problems arise in those areas or markets. Similarly, if a securities company's clients are overly concentrated, it may also face significant losses if those clients default or go bankrupt. Furthermore, if a securities company's business is geographically concentrated, it may incur substantial losses if those regions experience economic downturns or natural disasters.

4. Operational Risk

Operational risk for securities companies refers to losses or potential risks resulting from internal system process gaps, information system failures, employee misconduct, and delayed risk management. This risk can generally be categorized into internal fraud risk, external fraud risk, business process risk, personnel risk, system risk, legal compliance risk, and natural disaster risk.

These risk factors can significantly impact the operations and financial condition of securities companies.

5. Liquidity Risk

Liquidity risk refers to the risk that a securities company cannot timely obtain sufficient funds at reasonable costs to meet maturing debt obligations, fulfill other payment obligations, and satisfy the funding needs of normal business operations.

For securities companies, liquidity risk is primarily manifested in sudden large capital demands due to unexpected events, deterioration of external market financing conditions, restrictions on important financing channels, significant increases in financing costs, downgrading of ratings, and so on; unreasonable asset allocation, mismatched asset-liability structures, large underwriting commitments, term mismatches, oversized proprietary trading operations, counterparty risk transmission, and concentrated debts maturing without repayment.

V. Rating Methodology and Model Framework

"Regional Strength and Industry Risk" reflects the operational environment, operational status, development space, and existing risks of the securities industry. "Operational and Financial Risk" reflects the securities company's ability to utilize its functions, assets, and financing environment and the risks involved.

ARHK's path for constructing the rating methodology and model for the securities industry is as follows:

Step 1: Construct the evaluation indicator system, determining the names, meanings, values, and weights of the evaluation indicators.

Step 2: Determine the corresponding levels for "Regional Strength and Industry Risk" and "Operational and Financial Risk."

Step 3: Combine the levels from the two dimensions to determine the Pre-SRAF rating level of the rated entity based on the two-dimensional matrix.

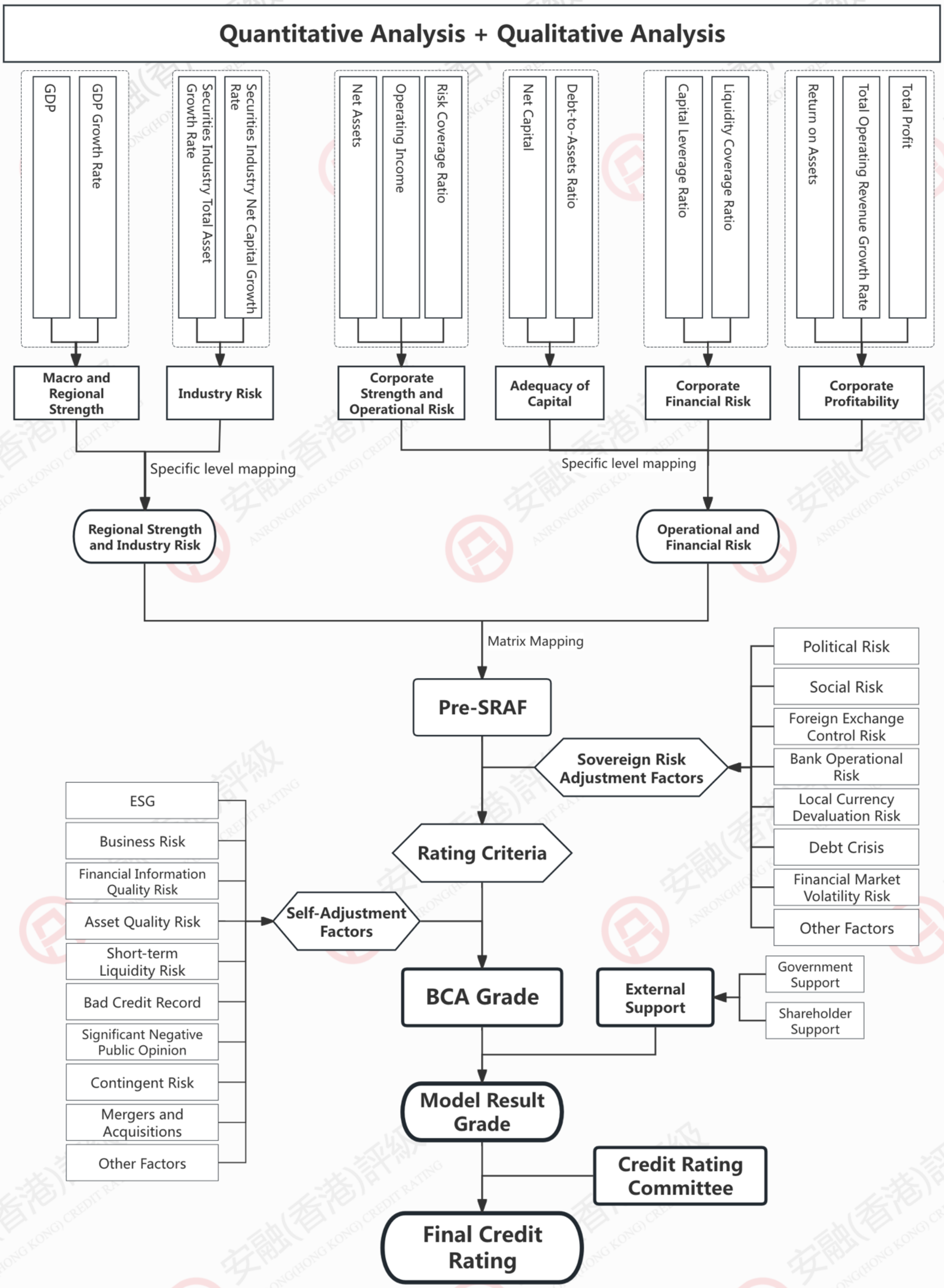
Step 4: Combine sovereign risk adjustment factors to determine the rating criteria for the rated entity.

Step 5: Combine self-adjustment factors to derive the BCA grade of the rated entity.

Step 6: Consider external support comprehensively to arrive at the credit rating of the rated entity (Model Result Grade).

Considering that the domestic and international rating industries generally implement a "three-tier nine-grade system," where "three tiers" are A, B, C, and "nine grades" are "AAA", "AA", "A", "BBB", "BB", "B", "CCC", "CC", "C, " and also considering that the default probabilities corresponding to "CCC", "CC", "C" are not significantly different, with the main difference reflected in the default loss rates, and since default loss rates are not the focus of ARHK's assessment and prediction, ARHK merges "CCC", "CC", and "C" into the same grade when setting evaluation indicators and dimensional grades. Except for the evaluation indicators and dimensions related to external support, which are set to three grades, other evaluation indicators and dimensions are set to seven grades. Additionally, the symbol "D" (determined by the Credit Rating Committee) indicates that the rated entity is no longer able to fulfill its debt obligations, and default has been confirmed.

Grade Meanings: Grades range from the lowest (Grade 1) to the highest (Grade 7, or Grade 3 if only three grades are used). Higher grades indicate a more positive assessment and forecast of the rated entity's debt repayment ability and willingness.


Quantitative Analysis + Qualitative Analysis
GDP
GDP Growth Rate
Securities Industry Total Asset Growth Rate
Securities Industry Net Capital Growth Rate
Net Assets
Operating Income
Risk Coverage Ratio
Net Capital
Debt-to-Assets Ratio
Capital Leverage Ratio
Liquidity Coverage Ratio
Return on Assets
Total Operating Revenue Growth Rate
Total Profit
Macro and Regional Strength
Industry Risk
Corporate Strength and Operational Risk
Adequacy of Capital
Corporate Financial Risk
Corporate Profitability
Specific level mapping
Specific level mapping
Regional Strength and Industry Risk
Operational and Financial Risk
Matrix Mapping
Pre-SRAF
Sovereign Risk Adjustment Factors
Political Risk
Social Risk
Foreign Exchange Control Risk
Bank Operational Risk
Local Currency Devaluation Risk
Debt Crisis
Financial Market Volatility Risk
Other Factors
Rating Criteria
Self-Adjustment Factors
ESG
Business Risk
Financial Information Quality Risk
Asset Quality Risk
Short-term Liquidity Risk
Bad Credit Record
Significant Negative Public Opinion
Contingent Risk
Mergers and Acquisitions
Other Factors
BCA Grade
External Support
Government Support
Shareholder Support
Model Result Grade
Credit Rating Committee
Final Credit Rating

1. Pre-SRAF Rating Levels

ARHK analyzes "Regional Strength and Industry Risk" primarily from the macro and regional strength and industry risk perspectives. In terms of "Operational and Financial Risk," it focuses on corporate strength and operational risk, capital adequacy, financial risk, and corporate profitability. A total of fourteen indicators are set, each with corresponding weights, and each indicator is divided into seven levels. Through level mapping, the final Pre-SRAF rating level of the rated entities is determined using a two-dimensional matrix mapping table.

(1) Regional Strength and Industry Risk

Primary Indicator	Secondary Indicator	Tertiary Indicator
Regional Strength and Industry Risk	Macro and Regional Strength	GDP
		GDP Growth Rate
	Industry Risk	Securities Industry Total Asset Growth Rate
		Securities Industry Net Capital Growth Rate

A. Macro and Regional Strength

The development trend of the macroeconomy affects the real economy, consumption, and investment demand, thereby influencing the rise and fall of asset prices in the financial market. Generally, lower interest rates, increased money supply, moderate inflation, low unemployment rates, stabilization of international trade conditions, and rising exchange rates are conducive to corporate profitability and economic growth, favoring the stable and healthy development of the securities industry.

The operational capability and asset quality of the securities industry are closely related to the economic development status of the main regions where they operate. Factors such as regional economy, industrial structure, and local policies significantly impact the operations of local securities companies. A favorable regional economic environment is beneficial for the operations of the local securities industry.

ARHK primarily examines the rated entities' macro and regional strength from the dimensions of GDP and GDP growth rate.

Generally, the GDP indicator refers to the GDP value of the region where the rated entity is registered or primarily operates. A higher value of this indicator indicates a better regional economic development status, stronger momentum for local economic development, better development of the real economy and financial market, and favorable conditions for the aggregation of funds and information, talent resource reserves, advanced technology cultivation, and infrastructure investment. Simultaneously, stronger regional economic competitiveness is conducive to securities companies expanding their scale and optimizing and adjusting their internal industrial and product structures, leading to better operational conditions and lower credit risk for securities companies. Typically, ARHK assigns higher ratings to securities companies in regions with higher GDP.

The GDP growth rate refers to the GDP growth rate of the region where the securities company is registered or primarily operates. The GDP growth rate is an important reference indicator for securities companies to assess market potential, formulate business strategies, and forecast future growth trends. Securities companies typically use the local GDP growth rate as a key indicator for measuring local economic activity and corporate profitability. A higher GDP growth rate means more profit opportunities for local enterprises and a more active capital market, thus providing securities companies with more business opportunities and growth space. Therefore, ARHK assigns higher ratings to securities companies in regions with higher GDP growth rates.

B. Industry Risk

Industry risk in the securities sector can be analyzed from the overall scale and change trends of assets and profits, total assets of the securities industry, net capital of the securities industry, and industry regulation. In this methodology and model, ARHK primarily examines the industry risk of the rated entities based on the total asset growth rate of the securities industry and the net capital growth rate of the securities industry.

Securities Industry Total Asset Growth Rate is one of the important indicators for measuring the growth of economic strength, business expansion capability, financial stability, and market competitiveness of securities companies. A larger total asset growth rate usually indicates stronger performance in terms of economic strength growth, business expansion capability, financial stability, and market competitiveness. Therefore, ARHK assigns higher ratings to securities companies with higher total asset growth rates.

Securities Industry Net Capital Growth Rate is one of the important indicators for measuring the enhancement of capital strength, risk resistance capability, and business development potential of securities companies. A larger net capital growth rate usually indicates a more positive performance in terms of capital strength, risk resistance capability, business development potential, and investor confidence. Therefore, ARHK assigns higher ratings to securities companies with higher net capital growth rates.

ARHK's specific level mapping standards for "Regional Strength and Industry Risk" are as follows:

Indicator	7	6	5	4	3	2	1
GDP (100 million yuan)	≥6000	[3000,6000)	[1000,3000)	[300,1000)	[100,300)	[50,100)	<50
GDP Growth Rate（%）	≥7	[5,7)	[3,5)	[1,3)	[0,1)	[-1,0)	<-1
Securities Industry Total Asset Growth Rate（%）	≥25	[20,25)	[5,20)	[0,5)	[-10,0)	[-15,-10)	<-15
Securities Industry Net Capital Growth Rate（%）	≥15	[10,15)	[5,10)	[0,5)	[-5,0)	[-10,-5)	<-10

(2) Operational and Financial Risks

Primary Indicator	Secondary Indicator	Tertiary Indicator
Operational and Financial Risks	Corporate Strength and Operational Risks	Net Assets
		Operating Income
		Risk Coverage Ratio
	Capital Adequacy	Net Capital
		Debt-to-Assets Ratio
	Corporate Financial Risk	Capital Leverage Ratio
		Liquidity Coverage Ratio
	Corporate Profitability	Net Profit Margin on Total Assets
		Operating Income Growth Rate
		Total Profit

A. Corporate Strength and Operational Risks

Corporate strength is an important factor reflecting a company's operational capacity. Companies with stronger corporate strength typically exhibit better economies of scale and stronger bargaining power; they usually have more scientific and standardized management, performing better in resisting cyclical risks in the industry. Securities companies with greater corporate strength often contribute more significantly to the national or local economy, making it easier for them to gain external support and development opportunities, thereby reducing operational risks. The corporate strength and operational risks of securities companies are mainly measured using indicators such as net assets, operating income, and risk coverage ratio.

Net Assets is a key indicator for evaluating the capital strength, financial stability, and operational steadiness of securities companies. Larger net assets usually indicate stronger capital strength, higher financial stability, and better operational steadiness. Therefore, ARHK assigns higher ratings to securities companies with larger net asset scales.

Operating Income is a significant reflection of a company's scale and business operation results, forming the foundation of its cash flow and profits. The operating income of securities companies includes net income from fees and commissions, net interest income, investment income, fair value changes, exchange gains, other business income, asset disposal gains, and other revenues. Generally, the larger the operating income, the stronger the comprehensive strength of the securities company and the lower its credit risk. Therefore, ARHK assigns higher ratings to securities companies with larger operating incomes.

Risk Coverage Ratio is a critical indicator for measuring the corporate strength and operational risks of securities companies. It plays a significant role in ensuring the stable operation of securities companies, meeting regulatory requirements, and enhancing market competitiveness. A higher risk coverage ratio indicates stronger capital adequacy and better risk management capabilities. Therefore, ARHK assigns higher ratings to securities companies with higher risk coverage ratios.

B. Capital Adequacy

Capital acts as a crucial buffer for absorbing various risk losses faced by securities companies. The evaluation of capital adequacy in securities companies depends on whether the level of capital and the quality of assets are sufficient to resist risks associated with securities assets. It is generally assessed through net capital, debt-to-assets ratio, capital adequacy ratio, and risk-weighted assets. In this methodology and model, ARHK primarily evaluates the capital adequacy of securities companies using net capital and the debt-to-assets ratio.

Net Capital is a comprehensive regulatory indicator for assessing the capital adequacy and asset liquidity of securities companies, reflecting their capital strength. Generally, a higher net capital value indicates stronger capital strength, greater risk resistance, more room for business development, and lower credit risk. Therefore, ARHK assigns higher ratings to securities companies with higher net capital.

Debt-to-Assets Ratio is an important indicator for assessing the capital adequacy of securities companies. A higher debt-to-assets ratio implies that securities companies bear more debt repayment responsibilities. In the face of market fluctuations or economic downturns, this could increase the debt repayment pressure for securities companies, potentially leading to liquidity risks. Therefore, ARHK assigns higher ratings to securities companies with lower debt-to-assets ratios.

C. Corporate Financial Risk

The financial risks of securities companies are mainly reflected in various aspects such as capital, asset quality, profitability, marketability, liquidity, business innovation, financial indicator growth, and financial management. In this methodology and model, ARHK primarily measures the financial risks of securities companies using the capital leverage ratio and liquidity coverage ratio.

Capital Leverage Ratio is an important indicator for measuring the core risk control capability and operational leverage level of securities companies. It reflects the ratio between core net capital that meets regulatory requirements and the total on- and off-balance-sheet assets. A higher capital leverage ratio usually indicates stronger risk control capability, more stable operational leverage, and higher investor confidence. Therefore, ARHK assigns higher ratings to securities companies with higher capital leverage ratios.

Liquidity Coverage Ratio is a key indicator for assessing the short-term liquidity risk tolerance of securities companies. It reflects the ratio between high-quality liquid assets held by securities companies and net cash outflows over the next 30 days under stress scenarios. A higher liquidity coverage ratio indicates stronger short-term liquidity risk tolerance, which helps improve the company's stable operational level, boost investor confidence, and better meet regulatory requirements. Therefore, ARHK assigns higher ratings to securities companies with higher liquidity coverage ratios.

D. Corporate Profitability

The profitability of securities companies can be analyzed from various aspects such as operating income, operating costs, profit levels, operating profit margin, and return on investment. In this methodology and model, ARHK primarily evaluates the profitability of securities companies using the Net Profit Margin on Total Assets, operating income growth rate, and total profit.

Net Profit Margin on Total Assets is an indicator for evaluating the profitability of securities companies. Under the same conditions, a higher net profit margin on total assets indicates stronger profitability. Therefore, ARHK assigns higher ratings to securities companies with higher returns on total assets.

Operating Income Growth Rate is an important indicator reflecting the growth status and development capacity of securities companies. It comprehensively shows the growth of major economic inflows generated from the daily activities of securities companies. A higher operating income growth rate indicates stronger business growth potential, pricing capability, and risk management ability. Therefore, ARHK assigns higher ratings to securities companies with higher operating income growth rates.

Total Profit is a crucial economic indicator measuring the financial results achieved by companies through production and operation activities over a specific period. A higher total profit indicates better business performance, stronger profitability, and lower credit risk. Therefore, ARHK assigns higher ratings to securities companies with higher total profits.

ARHK's specific level mapping standards for "Operational and Financial Risks" are as follows:

Indicator	7	6	5	4	3	2	1
Net Assets (100 million yuan)	≥1100	[450,1100)	[250,450)	[150,250)	[100,150)	[50,100)	<50
Revenue (100 million yuan)	≥220	[120,220)	[60,120)	[30,60)	[15,30)	[5,15)	<5
Risk Coverage Ratio (%)	≥450	[320,450)	[250,320)	[225,250)	[180,225)	[120,180)	<120
Net Capital (100 million yuan)	≥800	[300,800)	[200,300)	[110,200)	[80,110)	[50,80)	<50
Debt-to-Assets Ratio (%)	<57	[57,62)	[62,67)	[67,72)	[72,77)	[77,80)	≥80
Capital Leverage Ratio (%)	≥37	[32,37)	[25,32)	[20,25)	[16,20)	[13,16)	<13
Liquidity Coverage Ratio (%)	≥800	[500.800)	[340,500)	[240,340)	[170,240)	[145,170)	<145
Net Profit Margin on Total Assets (%)	≥2.2	[1.85,2.2)	[1.6,1.85)	[1.25,1.6)	[0.9,1.25)	[0,0.9)	<0
Operating Income Growth Rate (%)	≥25	[10,25)	[1.5,10)	[-10,1.5)	[-20,-10)	[-30,-20)	<-30
Total Profit (100 million yuan)	≥100	[55,100)	[20,55)	[10,20)	[5,10)	[-5,5)	<-5

(3) Pre-SRAF Rating Level Mapping

Based on the assigned values and weights of the indicators for macro and regional strength and industry risk, the "Regional Strength and Industry Risk" mapping tier can be obtained. Based on the assigned values and weights of the indicators for corporate strength and operational risks, capital adequacy, corporate financial risks, and corporate profitability, the "Operational and Financial Risks" mapping tier can be obtained.

By combining the mapping tiers of the above two dimensions and using the Pre-SRAF rating level two-dimensional matrix, ARHK can derive the two-dimensional matrix Pre-SRAF rating level mapping of securities companies.

Pre-SRAF Rating Level Mapping is as follows:

Pre-SRAF Rating Level		Regional Strength and Industry Risk						
		7	6	5	4	3	2	1
Operational and Financial Risks	7	aaa	aaa/aa+	aa+/aa	aa/aa-	aa-/a+	a+/a	a-/bbb+
	6	aaa/aa+	aa+/aa	aa/aa-	aa-/a+	a+/a	a-/bbb+	bbb/bbb-
	5	aa+/aa	aa/aa-	aa-/a+	a+/a	a/a-	bbb+/bbb	bbb-/bb+
	4	aa/aa-	aa-/a+	a+/a	a/a-	a-/bbb+	bbb/bbb-	bb+/bb
	3	aa-/a+	a+/a	a/a-	a-/bbb+	bbb/bbb-	bb+/bb	bb-/b+
	2	a/a-	a-/bbb+	bbb+/bbb	bbb/bbb-	bb+/bb	bb-/b+	b/b-
	1	a-/bbb+	bbb+/bbb	bbb/bbb-	bb+/bb	bb-/b+	b/b-	Below ccc

2. Sovereign Risk Adjustment Factors

Sovereign risk adjustment factors are crucial considerations for entities undergoing international credit ratings. ARHK uses "political risk," "social risk," "foreign exchange control risk," "bank operation risk," "local currency devaluation risk," "debt crisis," "financial market volatility risk," and "other factors" as sovereign risk adjustment factors to adjust the international credit of securities companies, resulting in the international rating benchmark for the rated entity. Given the numerous factors affecting sovereign credit risk, which are dynamically changing with international relations, economy, and industry development, the sovereign credit risk adjustment items listed in this methodology and method may not cover all adjustment elements and require continuous accumulation, summarization, and optimization in rating practice.

(1) Political Risk

If the rated entity has significant domestic political risk and geopolitical risk, its credit rating may be downgraded.

(2) Social Risk

If the rated entity has significant social conflicts, ethnic conflicts, cultural or religious conflicts, its credit rating may be downgraded.

(3) Foreign Exchange Control Risk

If the rated entity has significant risks of restricted capital flow, its credit rating may be downgraded.

(4) Bank Operation Risk

If the rated entity has significant risks of funds not being exchanged in time, its credit rating may be downgraded.

(5) Local Currency Devaluation Risk

If the rated entity has significant local currency devaluation risk, its credit rating may be downgraded.

(6) Debt Crisis

If the rated entity has a significant international external debt crisis, its credit rating may be downgraded.

(7) Financial Market Volatility Risk

If the rated entity has significant financial market volatility risk, its credit rating may be downgraded.

(8) Other Factors

Other factors refer to all sovereign factors beyond the aforementioned that may affect the debt repayment ability and willingness of urban investment enterprises. ARHK will appropriately adjust its credit rating based on specific circumstances.

Specific sovereign risk adjustment factors are as follows:

Primary Factor	Secondary Factor
Political Risk	Domestic Political Risk
	Geopolitical Risk
Social Risk	Social Conflicts
	Ethnic Conflicts
	Cultural or Religious Conflicts
Foreign Exchange Control Risk	Restricted Capital Flow
Bank Operation Risk	Operation Risk
Local Currency Devaluation Risk	Local Currency Devaluation Risk
Debt Crisis	Debt Crisis

Primary Factor	Secondary Factor
Financial Market Volatility Risk	Financial Market Volatility Risk
Other Factors	Other Factors

3. Rating Criteria

ARHK derives the rating criteria for the rated entity by combining sovereign risk adjustment factors with the Pre-SRAF rating level.

4. Self-Adjustment Factors

Self-adjustment is a supplementary analysis based on the evaluation of common characteristics of manufacturing enterprises, targeting the unique characteristic elements of the evaluated manufacturing enterprise. The evaluation result after individual characteristic adjustment is the basic credit rating that can fully reflect the manufacturing enterprise's own credit level. It is worth noting that only factors that impact the credit risk of manufacturing enterprises and occur only in individual manufacturing enterprises will be considered in the adjustment items. ARHK uses self-adjustment factors such as "ESG," "Business Risk," "Financial Information Quality Risk," "Asset Quality Risk," "Short-Term Liquidity Risk," "Bad Credit Record," "Significant Negative Public Opinion," "Contingent Risk," "Mergers and Acquisitions," and "Other Factors" to adjust urban investment enterprises. Due to the numerous factors affecting credit risk and their dynamic changes with economic and industry development, the adjustment items listed in this method may not cover all adjustment elements, requiring continuous accumulation, summarization, and optimization in the practice of rating work.

(1) ESG

ESG is the abbreviation for Environment, Social Responsibility, and Corporate Governance, which are important factors influencing the sustainable business development potential of the evaluated entity. If the evaluated entity performs poorly in ESG aspects, it may affect the stability of its production operations and financial performance, thereby increasing the credit risk of the evaluated entity. ARHK focuses on the negative impacts of various ESG factors. If the evaluated entity has relevant risk factors, its credit rating may be adjusted.

(2) Business Risk

If the rated entity has business transformation risk; or business cycle fluctuation risk; or concentration risk; or commercial foreign exchange risk; or international trade friction risk; or business interruption risk, its credit rating may be downgraded.

(3) Financial Information Quality Risk

Financial information is the basis for evaluating the financial risk of the rated entity. In evaluating financial risk, attention should be paid to whether the audit conclusion of the financial report is not an "Unqualified opinion" (similar situation if it is an international audit report); whether there are significant financial risks not reflected in the consolidated statements; whether the financial data is distorted. If negative, its credit rating may be downgraded.

(4) Asset Quality Risk

Entities with large-scale receivables for a single item, substantial restricted assets with legal disputes, asset change risks, or risks of waiving others' debts may face a downgrade in their credit rating.

(5) Short-term Liquidity Risk

If an entity faces short-term liquidity risks that could affect its medium and long-term credit status, a downgrade in credit rating may be warranted.

(6) Bad Credit Record

Entities with bad credit records, such as overdue debts or other records of dishonesty, may experience a downgrade in their credit rating.

(7) Significant Negative Public Opinion

Entities experiencing significant negative public opinion, where the impact hasn't been mitigated, may see a downgrade in their credit rating.

(8) Contingent Risk

Entities with significant litigation risk or high guarantee (joint liability guarantee) compensation risk may face a downgrade in their credit rating.

(9) Mergers and Acquisitions

Entities undergoing significant mergers and acquisitions with substantial investment may have their credit rating appropriately downgraded.

(10) Other Factors

Other factors refer to elements other than those mentioned that could affect a manufacturing enterprise's ability and willingness to repay debts. ARHK will make appropriate adjustments to its credit rating based on specific circumstances.

Specific self-adjustment factors are as follows:

Primary Factors	Secondary Factors
ESG	E
	S
	G
Business Risk	Business Transformation Risk
	Business Cycle Fluctuation Risk
	Concentration Risk
	Internal Control and Risk Management Levels
	Commercial Foreign Exchange Risk
	Operational Risk
	Business Interruption Risk
Financial Information Quality Risk	Financial Information Quality
Asset Quality Risk	Receivables
	Asset Restriction Situation
	Asset Change Risk
	Waiving Others' Debts Risk
Short-term Liquidity Risk	Short-term Credit Risk
Bad Credit Record	Debt Overdue
	Other Dishonesty Records
Significant Negative Public Opinion	Significant Public Opinion Risk
Contingent Risk	Litigation Risk
	Guarantee (Joint Liability Guarantee) Compensation Risk
Mergers and Acquisitions	Mergers and Acquisitions Risk
Other Factors	Other Factors

5. BCA Grade

ARHK derives the BCA grade of the rated entity based on the rating criteria and self-adjustment factors.

6. External Support

The external support adjustment factors are as follows:

Primary Factor	Secondary Factor
Government Support	Government Support Willingness
	Government Support Historical Record
Shareholder Support	Shareholder Support Willingness
	Shareholder Support Strength

If the evaluated entity can still obtain stable external support when facing a liquidity crisis and having difficulty fulfilling debt commitments, it will help stabilize the expectations of relevant parties, thereby reducing the likelihood of the evaluated entity experiencing an actual liquidity crisis. At the same time, the specific rescue measures taken by external supporters when the evaluated entity encounters an operational or liquidity crisis will help increase the likelihood of debt repayment at maturity or reduce the default loss rate.

The company usually obtain external support from the government and shareholders. ARHK mainly considers the external support obtained by manufacturing enterprises from two aspects: government support and shareholder support.

(1) Government Support

When considering government support for a company, ARHK primarily evaluates two dimensions: government support willingness and government support history. Based on a comprehensive assessment of these two dimensions, the level of government support for the rated entity is determined. In terms of government support willingness, ARHK considers the following aspects: government and its funding representatives' shareholding ratio in the rated entity; government support for the rated entity's business; and government control over the rated entity.

Government support history mainly evaluates the strength of general or special support provided by the government.

The mapping of government support is as follows:

Government Support		Government Support Willingness		
		3	2	1
Government Support Historical Record	3	3/2	2/1	1/0
	2	2/1	1/0	0
	1	1/0	0	0

(2) Shareholder Support

Shareholder support for a company mainly evaluates two dimensions: shareholder support willingness and shareholder support strength. Based on a comprehensive assessment of these two dimensions, the level of shareholder support for the rated entity is determined.

In terms of shareholder support willingness, the focus is on the rated entity's position and importance in the shareholder structure and development strategy. Specific considerations include: the shareholder's shareholding ratio in the rated entity; the rated entity's position in the shareholder's business layout; the rated entity's contribution to the shareholder in terms of assets, income, and profit; joint guarantee legal relationships with the shareholder; and the impact of the rated entity's default on the shareholder.

Shareholder support strength mainly evaluates the shareholder's current support strength and historical support record.

Shareholder support mapping is as follows:

Shareholder Support		Shareholder Support Willingness		
		3	2	1
Shareholder Support Strength	3	3/2	2/1	1/0
	2	2/1	1/0	0
	1	1/0	0	0

7. Final Credit Rating

Based on the BCA grade of the rated entity, ARHK considers external support to derive the rated entity's credit rating (Model Result Grade).

The final credit rating obtained through this methodology and model serves as a reference credit rating for the rated entity, only as a reference for the analyst's recommended credit rating and the credit rating committee's evaluation of the credit rating. The final credit rating is determined by the credit rating committee, and there may be differences between the final credit rating and the model result grade.

VI. Limitations of the Methodology Model

1. ARHK bases its judgment of various rating elements for such companies on their historical operational conditions. However, the impact of relevant elements and their future development on debt repayment ability may vary due to changes in the external environment. Therefore, this methodology and model cannot guarantee accurate prediction of the actual future default risk of such companies.

2. This methodology and model only list the key rating elements that need to be examined when rating such companies. It does not cover all elements that need to be considered when evaluating the credit risk of such companies.

3. There are human factors in the selection of indicators in this methodology and model. The weight of elements in the rating model represents the relative importance of artificially assessed rating elements. The rating model contains critical qualitative assessment factors, which may lead to this methodology and model not being able to fully and accurately reflect credit risk. At the

same time, each member of the credit rating committee may consider more factors beyond the scope of this methodology and model when making their own judgment conclusions. Therefore, the final determination of the credit rating always contains subjective influences. ARHK will periodically or irregularly review and revise this methodology and model as appropriate.

Appendix:

Indicator Calculation Formulas

1. Risk Coverage Ratio = Net Capital / Sum of Risk Capital Reserves × 100%
2. Proprietary Debt-to-Asset Ratio = Proprietary Liabilities / Proprietary Assets × 100% (Proprietary Liabilities = Total Liabilities – Agency Securities Trading Funds – Agency Underwriting Securities Funds, Proprietary Assets = Total Assets – Agency Securities Trading Funds – Agency Underwriting Securities Funds)
3. Capital Leverage Ratio = Core Net Capital / Total On- and Off-Balance Sheet Assets × 100%
4. Liquidity Coverage Ratio = High-Quality Liquid Assets / Net Cash Outflows in the Next 30 Days × 100%
5. Total Asset Net Profit Margin = Net Profit × 2 / (Total Assets at Year-End + Total Assets at Previous Year-End) × 100%

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