Classification: Restricted

RATING METHODOLOGIES

Insurance Companies

2024 – Public Version

TASSNIEF'S Insurance Rating Methodology

1.1. Summary: A Simplified Sequential Rating Approach

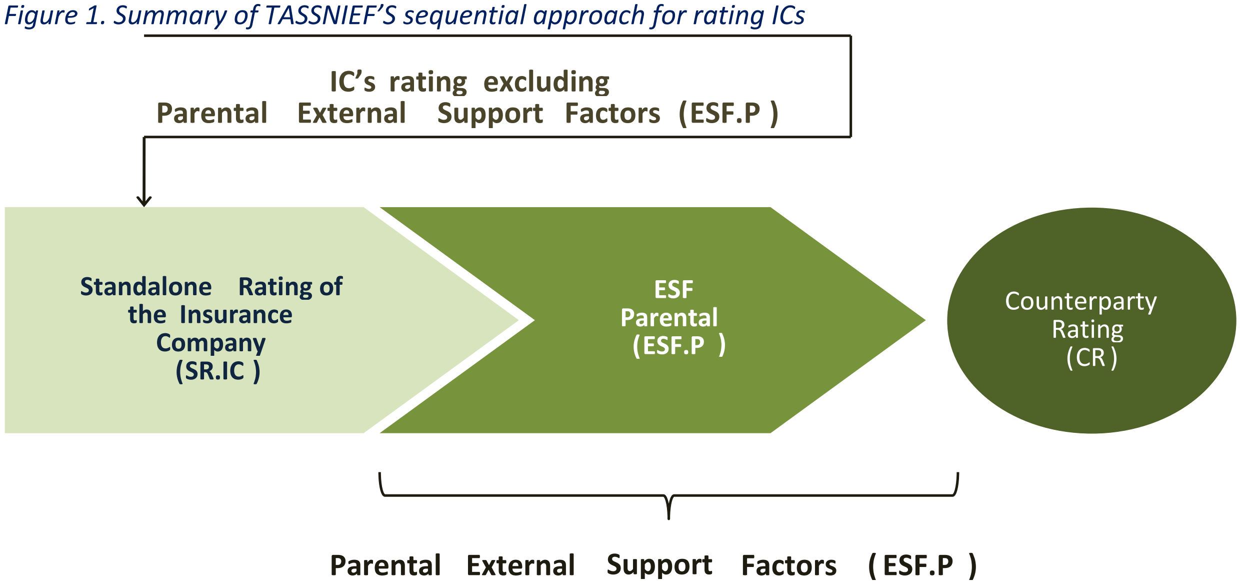
The Insurer Financial Strength (IFS) rating measures the capacity of an insurance company to meet its contractual obligations i.e. claims. As is the case with TASSNIEF's other rating methodologies, the rating methodology applicable to **Insurance Companies** (IC) is also built on a **sequential approach**, but in a simplified way. This sequential analysis leading to the *long-term* **Counterparty Rating** (CR) of an IC stands on two pillars: (i) the **Standalone Rating of the IC** (SR.IC); and (ii) the **Parental External Support Factors** (ESF.P). For insurance companies, TASSNIEF uses the Insurer Financial Strength (IFS) Rating as the CR. TASSNIEF does not capture any Systemic External Support Factors for Insurance Companies, neither at the national level, nor at the international one.

In summary, TASSNIEF relies on the following approach:

CR = SR.IC + ESF = SR.IC + ESF.P

Graphically, *figure 10* below summarizes the sequential approach used by TASSNIEF for rating Insurance Companies.

Figure 1. Summary of TASSNIEF'S sequential approach for rating ICs



1.2. Standalone Rating of Insurance Companies (SR.IC)

1.2.1. Definition and general principle

The Standalone Rating of an Insurance Company (SR.IC) reflects its intrinsic financial strength, which does not depend on any parental External Support Factor. The SR.IC stands as TASSNIEF'S opinion on an IC's capacity to face, alone, the drawbacks of the economic cycle as well as internal and external shocks susceptible to affect it. The SR.IC is the starting point of any credit analysis applicable to ICs.

TASSNIEF determines the SR.IC based on 9 **Standalone Rating Factors for Insurance Companies** (SRF.IC), within 3 broader categories similar to those used for rating Banks: (i) the **Structural** SRF.IC; (ii) the **Qualitative** SRF.IC; and (iii) the **Financial** SRF.IC. In comparison to the methodology applicable to Banks, it is the composition of each SRF.IC that differs from SRF used in Bank ratings. Each SRF.IC (from SRF.IC1 to SRF.IC9) is subject to a **Score** (S_n , n=1 to 9) and a **Weight** (W_n , n=1 to 9). The SR.IC is the weighted sum of the 9 Scores, as per the following formula:

$$\mathrm{SR.IC} = \sum_{n=1}^{9} \mathrm{W_n \, x \, S_n} + \text{adjustments}$$

1.2.2. Weighting the Standalone Rating Factors for Insurance Companies (SRF.IC)

The list and weighting of the 9 SRF.IC in their three categories are reported on the table below:

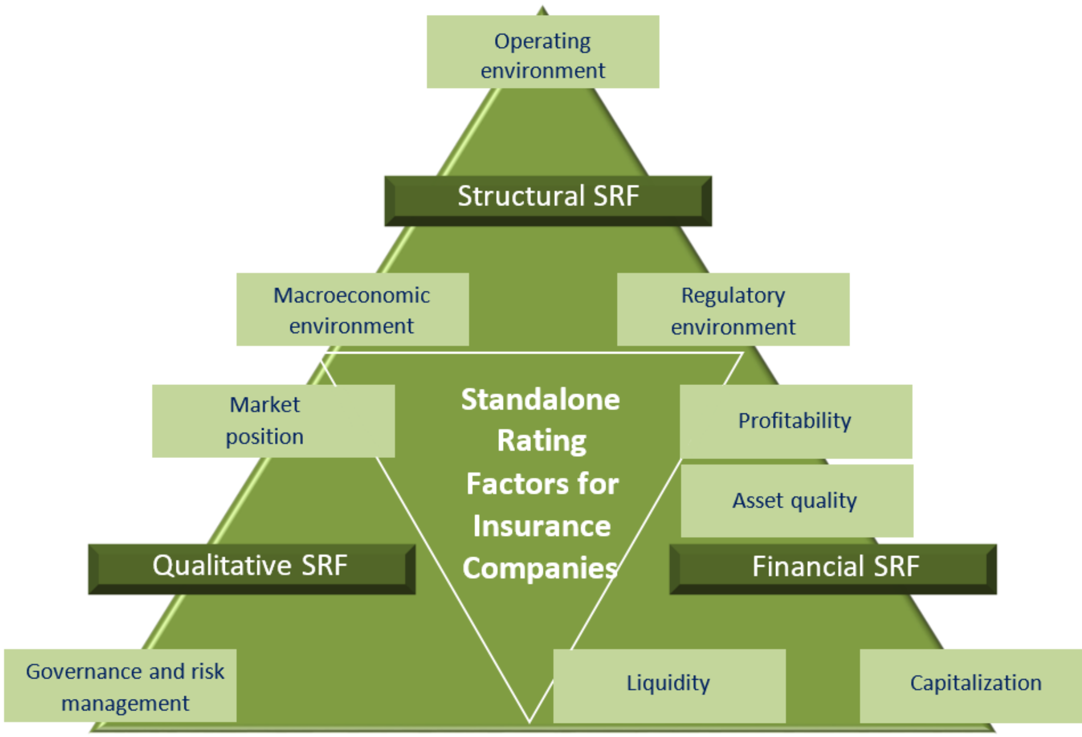
SRF.IC	Categories	Nature of the risk factors	Acronyms	Weighting (categories)	Weighting Wn (per SRF.IC)	Scores	Weighted Scores
SRF.IC1	**Structural SRF**	Macroeconomic environment	ME	**20%**	9%	S1	W1xS1
SRF.IC2		Operating environment	OE		7%	S2	W2xS2
SRF.IC3		Regulatory environment	RE		4%	S3	W3xS3
SRF.IC4	**Qualitative SRF**	Market position	MP	**40%**	20%	S4	W4xS4
SRF.IC5		Governance and risk management	GR		20%	S5	W5xS5
SRF.IC6	**Financial SRF**	Asset quality	AQ	**40%**	9%	S6	W6xS6
SRF.IC7		Profitability	PR		9%	S7	W7xS7
SRF.IC8		Liquidity	LQ		10%	S8	W8xS8
SRF.IC9		Capitalization	CF		12%	S9	W9xS9
					Total Weighted Score		∑WnxSn

Mechanically, the sum of weighted scores leads to the Total Weighted Score (TWS). This TWS does not necessarily reflect the opinion of TASSNIEF'S Rating Committee as to the financial strength of the Corporate. TASSNIEF's Rating Committee will exercise judgment which may allow deliberated deviation.

1.2.3. Definition of Standalone Rating Factors for Insurance Companies

The 9 Standalone Rating Factors for Insurance Companies (SRF.IC) selected by TASSNIEF are summarized on *figure 11* below. This is TASSNIEF'S **Insurance Pyramid**.

Figure 2 Summary of the 9 SRF.IC and the 3 categories of SRF: the Insurance Pyramid of TASSNIEF



(i) Structural SRF.IC: 20% weight

<u>SRF.IC1: Macroeconomic environment (ME; Weight of 9%)</u>

Weighted 9% of the SR, the ME factor, like the other Structural factors, is common to all entities rated by TASSNIEF in a given country, including Insurance Companies. This factor captures business opportunities and macroeconomic constraints for Insurance Companies. It includes output volatility in a given country, its diversification and its long-term sustainability. The Macroeconomic environment factor also measures the quality of economic policies, cyclical and structural, and their effect on Insurance Companies. Finally, this factor captures the size of the insured population in a given country or market, including households and companies, as well as the intensity / propensity with which insurance products are used.

In more detail, TASSNIEF captures here the intensity with which the domestic population and companies use insurance services, which is usually correlated to the level of wealth and revenues per capita, as well as to the mandatory nature of some damage insurance contracts (like motor, house, school and/or credit insurance). This factor also entails the level of disposable income of retail customers and the level of economic performance of the corporate sector, underlying Insurance Companies' capacity to distribute life and non-life insurance products. On the contrary, the sector concentration of the country's economic structure would drive this factor's score downwards, leaving less diverse business opportunities to Insurance Companies and generating both volatility and doubts as to the sustainability of domestic growth, as well as the necessity to reinsure/export a large portion of domestic insurance risk.

ME measures the economic risks weighing on a country's insurance sector as a whole.

SRF.IC2: Operating environment (OE; Weight of 7%)

The second Structural factor, OE, relates to the structural operating features that Insurance Companies need to take into account while conducting their financial operations. This factor, weighted 7%, includes a measure of the governance of the economic system in general, and that of the insurance sector in particular, the availability of qualified and trained financial professionals, the level of Insurance Companies' equipment in technology, the quality of infrastructure (especially telecommunication), the degree of granularity of business information available to Insurance Companies in their respective target markets, and the relevance of management tools used by financial institutions in a given country.

More precisely, TASSNIEF starts from the factual evidence that modern insurance, just like banking, has materially evolved over the past three decades to become a combination of i) a robust IT infrastructure, ii) superior human capital; iii) strong ability to minimize information asymmetries; and iv) efficient operations supported by fluid processes, policies, and procedures capable of compressing time. Such key factors of success dependent to a large extent on the sector's IT, human/educational, informational and cultural/business infrastructure within the country, which TASSNIEF captures in its Scorecard. A solid sector framework for Insurance Companies supports their ability to optimize risk pricing and allocation, and therefore reduces the likelihood of their failure.

OE measures the operating risks weighing on a country's insurance sector as a whole.

SRF.IC3: Regulatory environment (RE; Weight of 4%)

The third Structural factor, ER, measures the quality of insurance regulation and supervision in a given country. Regulation is made of the set of rules and standards applicable by the insurance sector in a given country or region. Supervision comprises all the (human, logistic, technological) means used by the regulator, in a given country or region, to ensure proper application of insurance regulations. TASSNIEF opines on each of these two dimensions. The volatility of standards, their more or less conservative nature, their comprehensiveness, the consistency of their articulation, rigor in the way they are actually applied are the relevant criteria TASSNIEF uses to form its opinion and will assign a score to this factor weighted 4%.

More precisely, TASSNIEF'S Analysts will allocate significant time understanding and analyzing the country's insurance regulation put in place over the years by the domestic regulator. TASSNIEF'S Analysts will compare such regulation with international standards and best practices to form an opinion as to its relevance, consistency, robustness, and more or less conservative nature. A well-designed regulatory framework helps detect and signal, early enough, possible pressure on Insurance Companies' solvency, without impeding their capacity to do business and remain sustainably profitable. Simultaneously, TASSNIEF'S Analysts will also form an opinion as to the willingness and capacity of the regulatory authority to control the extent to which regulation is implemented on the ground. Prudent regulation is considered by TASSNIEF as effective and efficient if the proper number of controls is actually conducted within the sector, through regular audits followed by corrective action plans.

RE measures the regulatory risks weighing on a country's insurance sector as a whole.

(ii) Qualitative SRF.IC: 40% weight

SRF.IC4: Market Position (MP; Weight of 20%)

Weighted at 20%, the MP factor is part of the 6 factors (from SRF.IC4 to SRF.IC9) that are specific to the rated IC, not to its environment, as are rating drivers SRF.IC1 to SRF.IC3. This is one of the most highly weighted rating factors. TASSNIEF defines «Market Position» as the strategic standing of the IC, its degree of specialization or, on the contrary, its operating diversification, and of course its size (best proxy of which is its market share) in relation to peers. An Insurance Company, like any other commercial entity, must maximize its returns given its competitive advantages, itself the source of its differentiation strategy (in price, quality or time). This factor encompasses the diversity of offered products, the diversity of its client base, its distribution strategy, as well as the degree of entrenchment and visibility of its brand name. Each of these sub-factors is scored by TASSNIEF'S Rating Committee.

MP measures the risk of strategic obsolescence weighing on an Insurance Company in an idiosyncratic way.

SRF.IC5: Governance and risk management (GR; Weight of 20%)

With MP, GR is the most highly weighted single rating driver, at 20%. Indeed, TASSNIEF builds its approach on the theoretical concept and the empirical evidence that ICs, just like other financial institutions are specialized in managing financial and non-financial risks. In particular, Insurance Companies offer instruments to mutualize and price risks, for households and corporate clients alike. Consequently, TASSNIEF relies on a descending (« *top down* ») approach to capture the mechanisms by which risks are driven and managed. TASSNIEF'S analysis starts at the level of the *Board of Directors*, through the concept of « governance ». The nature, quality and relevance of governance instruments are measured by TASSNIEF'S Analysts. Then, « risk management » (which is a *managerial* concept) is thoroughly reviewed and is subject to scoring. Finally, « controls », a series of *operating* tasks, are documented, analyzed and also scored.

TASSNIEF views this SRF as the most important of all. TASSNIEF's Analysts will start by understanding shareholders' appetite for risk, by asking the Insurance Company's Board of Directors to provide them with a quantified measure of such risk appetite. From there, Analysts will endeavor to opine on the relevance and consistency of the institution's main strategic orientations: a clearly formulated and well documented strategy is positive for the rating. TASSNIEF values, in the context of its rating, the alignment of interests between owners and managers.

From there, TASSNIEF'S Analysts will strive to understand the extent to which the implementation of strategy is more or less successful at the operating level, through a thorough review of the key risk indicators (KRIs) and key performance indicators (KPIs) management uses in its daily operations. Then, the « processes » (which include all the execution mechanisms pertaining to the company's *Management* and *Strategy*) are carefully studied and scored. In other words, such scores reflect both the *conceptual design* of the company's strategy and its *actual implementation*. The quality of audit, controls, management information system, reinsurance provider and reinsurance treaties are essential components of the analysis with respect to this factor. Finally, TASSNIEF'S Analysts will invest a significant amount of time with the institution's risk management department or division to thoroughly review the institution's Enterprise Risk Management (ERM) framework. The same is reviewed in order to determine preparedness of the organization in order to deal with the various forms of risk.

GR measures the quality and relevance of procedures and instruments for defining, identifying, quantifying and accepting or reducing risks in an Insurance Company.

(iii) Financial SRF.IC: 40% weight

SRF.IC6: Asset quality (AQ; Weight of 9%)

Asset Quality is critical when assessing the IFS rating. Since AQ can be compromised due to a number of factors which will negatively impact capitalization and/or liquidity indicators. This may significantly hamper the claim paying ability of the IC. Consequently, TASSNIEF intends to measure the *performance of risk portfolios*, including investment portfolios, taking into account the economic behavior of the various components of the balance sheet, through the cycle.

For investment portfolio analysis, risks are evaluated according to the credit risk, market risk and liquidity risk whereas for insurance risk assets evaluation is conducted via product concentration, degree of *concentration by sector, geography, and counterparts of insurance portfolios* for rated ICs.

AQ measures the risks of losses pertaining to an IC with respect to the nature concentration and profile of the risk classes it manages on and off its balance sheet.

SRF.IC7: Profitability (PR; Weight of 9%)

TASSNIEF builds its approach on the theoretical concept and empirical evidence that an IC cannot be simultaneously highly profitable, very liquid and well capitalized, except in the case of a monopoly capable of pricing its services to clients beyond the competitive price equilibrium. Competition among ICs will force insurance players to maximize, at best, two of the three factors. Standing as the first of these three exclusive factors, profitability is the financial factor that requires immediate attention, as it stands as an important source of risk for ICs. Insufficient returns today mean deteriorating liquidity tomorrow and weaker capital metrics after tomorrow. TASSNIEF will also conduct evaluation of the product and segment wise profitability in order to gauge the performance of each line of business and its contribution to the overall profitability of the insurance company.

In addition to assessment of the absolute earnings profile of the company, profitability will also be evaluated by two series of ratios: (i) *return indicators*, which include return on assets and return on equity; and (ii) *underwriting profitability*, this includes claims ratios, underwriting expense ratio as well as the combined ratio. A combined less than 100% suggests that the IC makes an operating profit in its core business, irrespective of its investment portfolio and other ancillary services.

TASSNIEF will analyze recurring investment income as well as its quantum in order to determine support provided to core operations. Sizeable recurring investment income of a seasoned insurance operator may be a result of good claims experience and provides a cushion to profitability.

PR measures the risks of insufficient returns, either because of margin compression, or because of inflating cost of risk, or as a result of deteriorating operating efficiency.

SRF.IC8: Liquidity (LQ; Weight of 10%)

Beyond insufficient returns, liquidity is the other major reason why ICs tend to default. TASSNIEF identifies asset liquidity, outflows of liabilities and asset-liability management (ALM). Consequently, the calibration of the « liquidity » section of the Scorecard captures these three elements that constitute the analysis of an IC's liquidity position: the primary focus is given to *asset liquidity*; in addition, TASSNIEF combines in one single score the issue of *the funding risk and balance sheet management*, as solutions that the IC uses in order to face its immediate liquidity needs, given the pace at which assets are transformed into cash flows. Furthermore, ageing of insurance debt as well as its multiples are also analyzed as it may cause a drag on the company's liquidity. Insurance debt comprises reinsurance receivables as well as premium due but unpaid.

To be more precise the above-mentioned liquidity dimensions are further made explicit as follows:

- ***Asset liquidity***: the objective here is to measure the proportion of liquid assets on the balance sheet. Liquid assets are made of cash, due from banks and the most liquid portion of the investment portfolio. ICs are compared and ranked depending on the proportion of such liquid assets in total assets. The higher the proportion, the stronger the score.
- ***Funding risk***: this concept refers to the stickiness of liabilities. The longer term they are and the stickier they are, the better it is for the rating. Short-dated liabilities tend to put pressure on cash flows and also crystalize in situations of stress. Therefore, TASSNIEF'S Analysts are asked to form an opinion as to the more or less sticky nature of liabilities capable of sheltering the balance sheet.
- ***ALM***: Asset-liability management refers to transformation risks. ICs may use short-dated liabilities to fund longer tenor assets, generating maturity gaps. If such maturity gaps inflate, ALM is under pressure. TASSNIEF will ensure that short-term assets are sufficient to cover short-term liabilities and that long-term funding is available to fund long-term assets.

LQ captures the quality and relevance of the measures, mechanisms, and instruments for the management of transformation risks pertaining to an IC's balance sheet.

SRF.IC9: Capitalization (CF; Weight of 12%)

Capitalization is one of the pertinent factors when claims paying ability is being assessed for ICs. This is because ICs with weak capitalization have minimal cushion to persevere through underwriting losses. In the same vein, an IC with strong capitalization is poised well to use its financial muscle in order to utilize potential for growth in the industry.

The capitalization of an IC constitutes a form of resulting image that the regulator captures through solvency ratio. TASSNIEF uses this regulatory piece of information to measure the trend pertaining to the pace of growth of *covered damages and risky assets*. In addition, TASSNIEF uses a more conservative and rawer metric for financial leverage, by comparing equity capital to the technical reserves and interest bearing debt of the company. Technical reserves comprise large liabilities of the IC covering outstanding claims and unearned premium. In addition, Tassnief will also evaluate operating leverage of the company which compares equity capital of the IC to the size of net premium. This is done in order to gauge whether the risk taken by the IC is in line with its capitalization levels. Hence, with regards to these metrics, TASSNIEF believes the IC's capital position will be well captured in its analysis.

CF measures the liability risks of an IC, either because of excessive financial leverage, or because of inadequate capitalization, weighing on its sustainability.

1.3. Parental External Support Factors (ESF.P)

A number of Insurance Companies that will require TASSNIEF'S rating services will be subsidiaries of financial groups, which in turn will be rated either publicly or confidentially. Subsidiary ICs will be entitled, in many cases, to receive parental support, which can be made available to them in several forms: operating support, liquidity support and/or capital support in particular. Therefore, these forms of support must be reflected in the Counterparty Rating of the subsidiary IC.

TASSNIEF thus includes **Parental External Support Factors** (ESF.P) in ICs' rating, when deemed necessary. For TASSNIEF, the Counterparty Rating (CR) of the IC will be derived from the sum of SR.IC and ESF.P:

CR = SR.IC + ESF.P

ESF.P mainly depends on the degree **Strategic Importance (I-Strat)** of the subsidiary to the parent. TASSNIEF distinguishes between 3 degrees of Strategic Importance: High, Medium or Low.

1.4. Counterparty Rating (CR) and Client Rating (CLR) of Insurance Companies

The Counterparty Rating of Insurance Companies reflects TASSNIEF'S opinion as to the IC's capacity and willingness to honor its financial obligations, especially and most importantly the payment of its financial debt. Having said that, an Insurance Company also carries other sorts of liabilities, contingent to the occurrence of damages. Such contingent liabilities often stand as priority payments (senior) in case the Insurance Company defaults on its financial debts, and priority payments, or in case the Insurance Company is liquidated.

In order to reflect such « seniority » of the contingent liabilities towards its insured clients, TASSNIEF has developed a concept specific to Insurance Companies, i.e. which of an IC's « **Client Rating** » (CLR) also called « **Claim Payment Ability** ».

This is to distinguish between the probability of default and loss given default faced by clients on the one hand, and the probability of default and loss given default faced by other (debt) counterparts on the other hand. By definition: CLR > CR.

RATINGS METHODOLOGY
Insurance Companies

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