



REPUBLIC OF GHANA

MINISTRY OF FINANCE

CREDIT RISK ASSESSMENT FRAMEWORK FOR UTILITY SECTOR

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ACRONYMS AND ABBREVIATIONS

CRA	Credit Risk Assessment
CRAF	Credit Risk Assessment Framework
CRT	Credit Risk Team
DSCR	Debt Service Cover Ratio
EDITDA	Earnings Before Interest, Tax, Depreciation and Amortization
IFRS	International Financial Reporting Standard
MOF	Ministry of Finance
PDs	Primary Dealers
PFMA	Public Financial Management Act
PIAD	Public Investment and Asset Division
PPPs	Public Private Partnerships
PURC	Public Utility Regulatory Commission
RMU	Risk Management Unit
SOEs	State-Owned Enterprises
TDMD	Treasury and Debt Management Division



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Credit Risk Assessment Framework for Utility Sector

FOREWORD

Sovereign credit guarantees and government on-lending can catalyse private sector investment and fulfil specific policy objectives. However, Contingent Liabilities arising from guarantees and on-lending pose a potential risk for national budget and debt. Contingent liabilities arising from Public Private Partnerships (PPPs), Social Security funds, banks, primary dealers (PDs), natural disasters and judgement debt may also require regular monitoring. Government intends to plug vulnerabilities in its public finance including monitoring risks from government exposure to State-Owned Enterprises (SOEs). The current Debt Sustainability Analysis incorporates on-lent and guaranteed debt of the SOEs, and the determination of borrowing limits takes into account new financing by SOEs.

Prudent risk management can help identify and mitigate these risks. It is therefore a requirement under the Public Financial Management (PFM) Law to carry out Credit risk assessment on beneficiary institutions seeking government support in the form of on-lending and guarantees. The public debt component of the PFM law covers a wide range of financial instruments, including financial derivatives designed to purposely meet our economic circumstance as a lower middle income country.

Government has demonstrated strong commitment by taking remarkable steps towards improving public debt management in the country, and the development of the Credit Risk Assessment Framework (CRAF) is meeting this key commitment. The CRAF is the first working model for assessing credit risk of SOEs in Sub-Saharan Africa, and it will be updated from time to time, to reflect changes in the willingness and capacity of SOEs to honour their debt obligations.

It is my fervent hope that this model serves a useful working tool for the Credit Risk Team so that they can proffer informed advice to policy makers in mitigating credit risks.

God Bless!!!



Ken Ofori-Atta

Minister for Finance



SECTION ONE: INTRODUCTION

1. The government has over the years provided financial support in the form of guarantees and on-lending to strategic public entities, mainly State-Owned Enterprises (SOEs), with the objective of supporting the sustainability and profitability of these entities. However, the provision of financial support exposes the government to contingent liabilities, as some public entities may renege on their repayment obligations.
2. Against the backdrop of potential financial exposure of Government to the indebtedness of these entities, Sections 66 (2-3) and 67 (2-3) of the Public Financial Management Act, 2016 (Act 921) empowers the Public Debt Management Office to regularly assess, monitor and report on the credit risk of these entities. The goal is to minimise any unintended consequences of non-payment of their outstanding obligations on the fiscal position of the government.
3. In fulfilment of the legal requirement, this Framework has been developed by the Treasury and Debt Management Division (TDMD) to determine the credit quality of public entities. The document explains the approach used to conduct the credit risk assessment of public entities in respect of guarantees and on-lent facilities.
4. The rest of the report is structured as follows: Section 2 looks at the coverage of the adopted methodology for the assessment. The selected risk indicators, weight assignments, and overall risk ratings are explained in Section 3. The Conclusion and Responsibility are provided in Sections 4 and 5 of the Report respectively.



SECTION TWO: SCOPE OF ASSESSMENT

5. This document primarily covers the government's exposure arising from debt management operations in relation to on-lending and guarantees. Liabilities arising from Public-Private Partnerships (PPPs), financial sector (banks), natural disaster, judgment debt, etc., are currently not covered under this framework.

6. The credit risk assessment seeks to analytically establish the credit quality of entities who are seeking to borrow, and thus, is not based on the specific projects for which the borrowed funds will be used. It is expected that individual projects would have been assessed and approved by the Public Investment and Asset Division (PIAD) of Ministry of Finance (MoF) for possible implementation.



SECTION THREE: CREDIT RISK ASSESSMENT METHODOLOGY

7. In developing the Credit Risk Assessment Framework (CRAF), the scorecard methodology was adopted for the credit risk analysis. This methodology was selected because it is relatively simple, user-friendly and applied by rating agencies, hence, will enable the Credit Risk Team (CRT) to test its results. The methodology also allows for the use of both quantitative (financial) and qualitative (business environment) information in assessing the performance of public entities.

8. The development of this methodology was done through a thorough content analysis of various literature relating to credit risk. With this approach, a risk rating (or score) is assigned to each of the selected risk indicators which determine the extent of Government's exposure to that entity, as explained in the following steps:
 - Identify the business and financial risk indicators;
 - Assign weights to each risk indicator based on the extent to which these indicators influence Government's exposure;
 - Assign scores to each risk indicators based on the entity's performance;
 - Calculate the weighted score of each risk indicator; and
 - Sum these weighted scores to obtain the overall risk rating of the entity.

3.1 BUSINESS AND FINANCIAL RISK INDICATORS

9. Key business and financial indicators that are essential in assessing an entity's ability and willingness to settle their financial obligations have been identified and selected (Table 1). Risks relating to the business environment of the entity are the regulatory framework, managerial structure, operating environment and diversification. The relevant key indicators selected in assessing the entities' financial risk are profitability, solvency, liquidity, and efficiency.



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Table 1: Risk Indicators

Business Risk Indicators	Financial Risk Indicators
<ul style="list-style-type: none">• Regulatory Framework<ul style="list-style-type: none">❑ Adequacy of enabling Act❑ Rate setting flexibility❑ Sufficiency of rates❑ Independence of the regulator• Managerial structure<ul style="list-style-type: none">❑ Entity complying with established regulations❑ Corporate Governance❑ Reporting standards of annual reports• Operating environment<ul style="list-style-type: none">❑ Market share/type• Diversification<ul style="list-style-type: none">❑ Input sources❑ Sources of income	<ul style="list-style-type: none">• Profitability<ul style="list-style-type: none">❑ EBITDA¹❑ Revenue growth• Solvency<ul style="list-style-type: none">❑ Debt Service Cover Ratio❑ Debt /equity• Liquidity<ul style="list-style-type: none">❑ Current ratio❑ Cash ratio• Efficiency<ul style="list-style-type: none">❑ Receivable days❑ Revenue/assets❑ Cost/income

3.1.1. Business Risk Indicators

10. A detailed explanation of the above-mentioned business risk indicators is described below.

Regulatory Framework

11. It examines the regulation that governs the entity in terms of price setting and performance. The considerations for this factor include:

- ❑ **Adequacy of regulation** looks at the established legal regulations that govern an entity and the adequacy of these regulations to impact positively on its operations;
- ❑ **Rate setting flexibility and timeliness** examines the ease with which the entity is able to set its own tariffs. For regulated entities, it examines the ease at which the Regulator adjust tariffs in line with its adjustment formula. For instance, in the utility sector, Public Utilities Regulatory Commission (PURC) adjusts rates in line with its automatic formula. Entities that fall within this sector will be rated based on the number of times PURC undertakes a review in line with the entity's proposal;

¹ **EBITDA** refers to *Earnings Before Interest, Tax, Depreciation and Amortization*



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- **Sufficiency of rates** ascertains whether the rate set by the Regulator is adequate for an entity to achieve full cost recovery and realistic returns on its investments. The importance of this factor is that it helps in determining whether or not the revenues generated by the entity will be adequate in servicing its debt obligations; and
- **Independence of the regulator** looks at the ability of the regulator to act independently at all times, without unnecessary political influence while keeping in mind the best interests of the entity, and consumers in the industry at large.

Managerial Structure

12. It assesses management's decision making process and performance per its mandate. The key indicators under this factor are:

- **Compliance with established regulations** assesses the commitment with which an entity adheres to the established laws and regulations. An entity faces a higher risk when it engages in activities outside of its established and approved mandate;
- **Governance** evaluates the quality and structure of an entity's management and governing board. Decisions taken by the board and management's ability to implement same affects an entity's creditworthiness; and
- **Reporting standards** looks at the frequency and quality of audited reports of the entity in line with internationally acceptable standards for reporting.

Operating Environment

13. It broadly looks at the economy and the industry within which the entity operates, as well as the combination of internal and external factors that influence an entity's operation. The primary sub-factor considered here is:

- **Market share/type** assesses the percentage of a market controlled by an entity, and is indicative of how well it performs in the industry within which it operates. It is a key indicator of the market competitiveness of the entity's products or services. The ability of an entity to maintain its market share over a period influences the amount of revenue it can generate, thereby giving a strong indication of its creditworthiness.

Diversification

14. It examines the various sources of input of an entity and its income sources. The ability of an entity to diversify its business operations is essential as it helps in curtailing the risks that may occur due to changes in economic cycles. Factors considered here include:

- **Input sources** assess the variety of inputs an entity uses to generate its products. The ability of the entity to generate its product from diverse sources



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provides some indication of its creditworthiness. This will ensure that in circumstances where the main input source is unavailable, the entity can rely on the other sources. Well-diversified input sources can mitigate the impact of changes in input prices; and

- **Income sources** assess the ability of an entity to generate revenues from different sources. For instance, entities in the utility sector tend to earn a greater percentage of their revenue from a single source. Failure or delays in revenue collections will reduce an entity's ability to repay its debt obligations.

3.1.2. Financial Risk Indicators

15. This section provides a detailed explanation of the financial risk indicators mentioned in Table 1.

Profitability

16. It evaluates the entity's revenue generation ability, in net terms, from its operations. The key variables of interest include:

- **EBITDA margin** assesses an entity's operating profitability and cash flow, and may be used as a proxy for the earning potential of a business. Higher EBITDA margin is associated with smaller operating expenses in relation to total revenue, leading to a more profitable operation; and
- **Revenue growth** measures the change in volume of an entity's sales/revenue in comparison to the previous year's performance, and provides an indication of trends in the entity's sales/revenues over time.

Solvency

17. It assesses the ability of an entity to meet its long-term debt obligations and to accomplish long-term growth and expansion. It indicates an entity's ability to continue operations into the foreseeable future. The key sub-factors considered are:

- **Debt Service Coverage Ratio** measures the ability of the entity's projected cash flow to meet its debt obligations. It is used in assessing an entity's ability to generate enough cash to cover its debt payments; and
- **Debt/Equity** measures the proportion of an entity's total debt to equity that is used to finance its total assets. An entity that is heavily financed by debt may pose a greater risk to investors.

Liquidity

18. It assesses the extent to which the entity has the cash to meet its immediate and short-term debt obligations, or the ease with which its assets can be quickly converted into cash without any significant loss in value. Factors considered here include:

- **Current ratio** measures the financial health of an entity by determining the ease with which the entity can turn its current assets into cash and how sufficient they are to meet its short-term liabilities. The shortcoming is that it



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incorporates all of the entity's current assets, including those assets that may not be easily liquidated; and

- **Cash ratio** measures the sufficiency of the entity's cash and cash equivalent to meeting its short-term liabilities or operating needs.

Efficiency

19. It assesses the entity's ability to use its assets to generate income. The key variable of interest is the time it takes for the entity to collect cash from customers or the amount of time it takes to convert inventory into cash. Factors considered here include:

- **Receivable days** measures the number of days it takes an entity to collect from customers outstanding invoices. It is important because it indicates the efficiency with which an entity manages the credit it issues to its customers and collects on that credit, and hence shows the entity's ability to meet its debt obligations:
- **Revenue/assets** measures an entity's revenues relative to its assets. It shows the efficiency of an entity in turning its assets into revenue; and
- **Cost/income** measures an entity's costs in relation to its revenue. The ratio gives a clear view of how efficiently the entity is being run and is indicative of how profitable it is.

3.2 ASSIGNING WEIGHTS TO INDIVIDUAL RISK INDICATORS

20. In the assessment, weights are assigned to the business and financial risk indicators based on their importance in establishing the creditworthiness of an entity. A weight of 30 percent and 70 percent are assigned to the business and financial risk indicators respectively (Figure 1). Table 2a and 2b provide a detailed breakdown of the weights assigned.



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Figure 1: Assignment of Weights to Risk Indicators

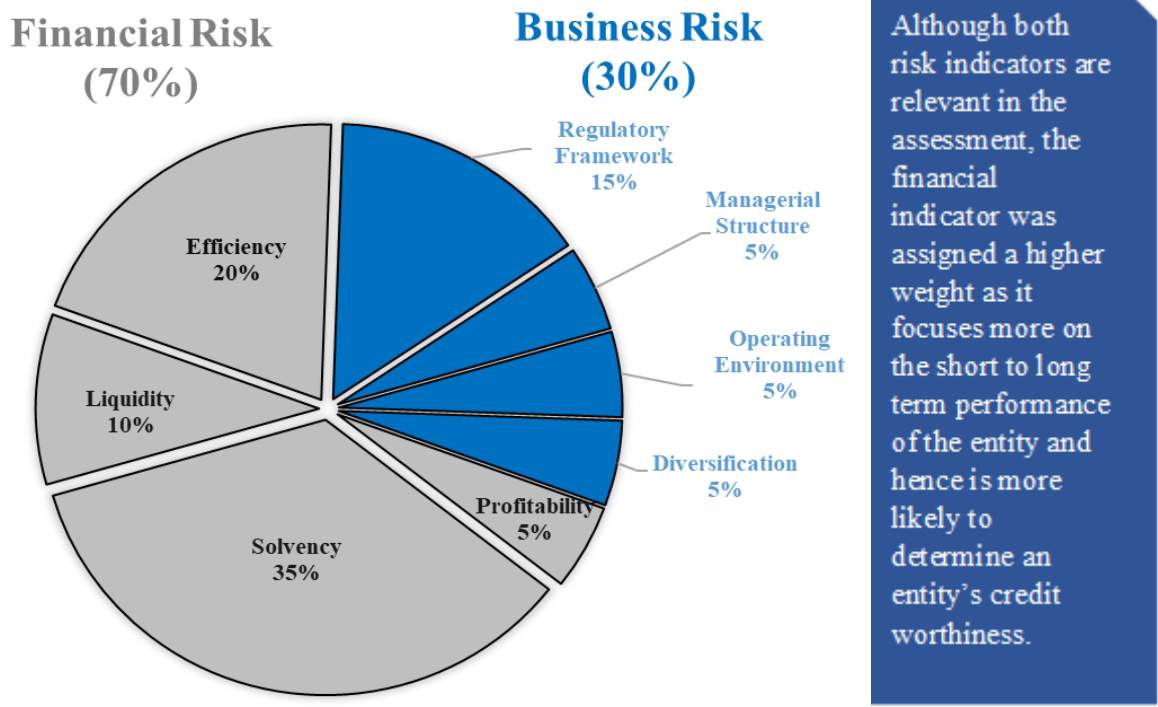


Table 2a: Assignment of Weights to Selected Business Risk Indicators

Rating Factors	Factor Weights
Business Risk Indicators	
<ul style="list-style-type: none"> ● Regulatory Framework <ul style="list-style-type: none"> □ Adequacy of enabling Act □ Rate setting flexibility □ Sufficiency of rates □ Independence of the regulator 	<p>15%</p> <p>1%</p> <p>10%</p> <p>2%</p> <p>2%</p>
<ul style="list-style-type: none"> ● Managerial structure <ul style="list-style-type: none"> □ Compliance with established regulations □ Corporate Governance □ Reporting standards of annual reports 	<p>5%</p> <p>2%</p> <p>2%</p> <p>1%</p>
<ul style="list-style-type: none"> ● Operating environment <ul style="list-style-type: none"> □ Market share/type 	<p>5%</p> <p>5%</p>
<ul style="list-style-type: none"> ● Diversification <ul style="list-style-type: none"> □ Input sources □ Sources of income 	<p>5%</p> <p>3%</p> <p>2%</p>



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Table 2b: Assignment of Weights to Selected Financial Risk Indicators

Rating Factors	Factor Weights
Financial Risk Indicators	
<ul style="list-style-type: none">● Profitability<ul style="list-style-type: none">□ EBITDA□ Revenue growth	5% 3% 2%
<ul style="list-style-type: none">● Solvency<ul style="list-style-type: none">□ Debt Service Cover Ratio□ Debt /equity	35% 25% 10%
<ul style="list-style-type: none">● Liquidity<ul style="list-style-type: none">□ Current ratio□ Cash ratio	10% 2% 8%
<ul style="list-style-type: none">● Efficiency<ul style="list-style-type: none">□ Receivable days□ Revenue/assets□ Cost/income	20% 12% 4% 4%

3.3. ASSESSMENT OF RISK INDICATORS AND SCORING GUIDANCE

21. The ability of an entity to repay its debt is analysed by assigning a rating to the identified business and financial risk indicators. A score of 1, 2 or 3 is assigned to each risk indicator, signifying “strong”, “fair” or “weak” performance for these indicators, respectively.

22. The assignment of scores to the business risk indicators is based on the analyst’s assessment of the indicator. The appendices section provides a detailed explanation for each of the business indicators and the scoring criteria. However, for financial indicators, the assignment of scores is centered on a risk rating scale as shown in Table 3 below. The table serves as a guide in the assignment of risk ratings to the selected financial indicators. In the assessment, the TDMD also considers any forward-looking information that is likely to affect the business and financial performance of an entity.



Table 3: Risk Rating Scale

Risk Indicators	1_Strong	2_Fair	3_Weak
Profitability			
EBITDA Margin	$X \geq 13\%$	$5\% < X < 13\%$	$X \leq 5\%$
Revenue	$X \geq 40\%$	$12\% < X < 40\%$	$X \leq 12\%$
Solvency			
DSCR	$X \geq 1$	$0.5 < X < 1$	$X \leq 0.5$
Debt/Equity	$X \leq 1$	$1 < X < 2$	$X \geq 2$
Liquidity			
Current Ratio	$X \geq 1.5$	$1 < X < 1.5$	$X \leq 1$
Cash Ratio	$X \geq 1$	$0.5 < X < 1$	$X \leq 0.5$
Efficiency			
Receivable Days	$X \leq 60$	$60 < X < 100$	$X \geq 100$
Revenue/Assets	$X \geq 33\%$	$33\% > X > 20\%$	$X \leq 20\%$
Cost/Income	$X \leq 49\%$	$49\% < X < 80\%$	$X \geq 80\%$

Where X represent the financial risk factor performance of an entity

3.4 CALCULATION OF WEIGHTED SCORE

23. The weighted score of each individual risk indicator is calculated as the weight (W) multiplied by its score (S) as shown in Table 4. This is then summed up to attain the overall risk rating of the entity.



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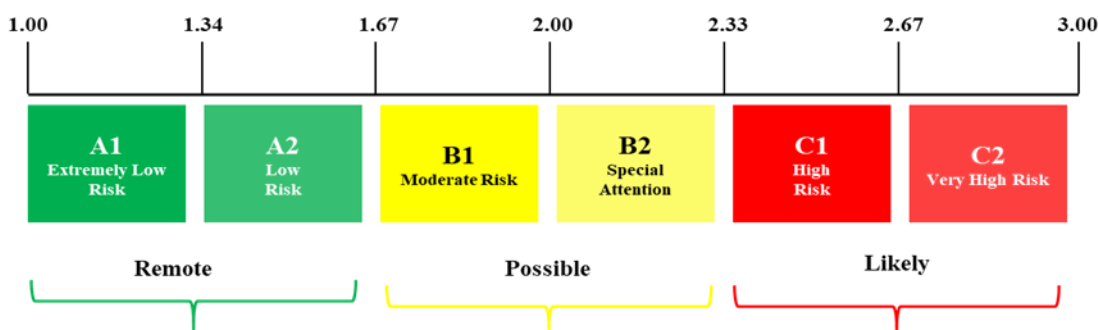
Table 4: Risk Rating Scorecard

Indicators	Weights (W)	Score (S)	Weighted Score
Business Indicators	30%		
1. Regulatory Framework	15%		
1.1. Adequacy of enabling Act	1%	1	0.01
1.2 Rate setting flexibility	10%	2	0.2
1.3 Sufficiency of rates	2%	2	0.04
1.4 Independence of the regulator	2%	2	0.04
2. Managerial structure	5%		
2.1 Entity complying with established regulations	2%	2	0.04
2.2 Corporate Governance	2%	1	0.02
2.3 Reporting standards of annual reports	1%	2	0.02
3. Operating environment	5%		
3.1 Market share/type	5%	1	0.05
4. Diversification	5%		
4.1 Input sources	3%	1	0.03
4.2 Sources of income	2%	2	0.04
Financial Indicators	70%		
5. Profitability	5%		
a. EBITDA	3%	1	0.03
b. Revenue growth	2%	3	0.06
6. Solvency	35%		
a. Debt Service Cover Ratio	25%	2	0.5
b. Debt /equity	10%	2	0.2
7. Liquidity	10%		
a. Current ratio	2%	3	0.06
b. Cash ratio	8%	3	0.24
8. Efficiency	20%		
a. Receivable days	12%	3	0.36
b. Revenue/assets	4%	3	0.12
c. Cost/income	4%	2	0.08
TOTAL			2.14

3.5. ASSIGNING OVERALL RISK RATINGS

24. The overall weighted score is mapped to an alphabetical rating as shown in Figure 2, with A1 signifying extremely low risk and C2 implying very high risk. The figure also shows the likelihood of the risk materializing (i.e. entity may default on the payment of its debt obligations).

Figure 2: Overall Rating/Extent of Exposure and Likelihood of its Materialization



SECTION FOUR: CONCLUSION

25. The scorecard methodology is a useful technique for assessing an entity's creditworthiness as it accommodates the use of both qualitative (business risk) and quantitative (financial risk) indicators in the assessment.
26. The TDMD, on an annual basis, will conduct a credit risk assessment for identified entities, to be abreast with changes in the operations of the entities and how to minimise government's credit risk exposure.



SECTION FIVE: RESPONSIBILITY

27. It is the responsibility of the Risk Management Unit (RMU) within TDMD to maintain and periodically update this methodology report. This will ensure that the document is always in line with best practice. In addition, objectivity is a key factor for a credible risk rating of an entity and this should be the bedrock of every credit risk assessment.

28. As per the PFMA, the TDMD is mandated to present a report to Management after performing a credit risk assessment of an entity. The recommended format in fulfilling this mandate is as follows:

- ❑ Introduction – background/objective;
- ❑ Assessment of the business indicators;
- ❑ Assessment of the financial indicators;
- ❑ Overall rating; and
- ❑ Recommendation.



APPENDICES

Business Framework

Regulatory Framework

Under this indicator, key issues considered include:

- The frequency of changes in legislation governing the entity's operations;
- The level of independence of the regulator from Government;
- The frequency of adjustment of rates;
- The sufficiency of the rates to help the entity cover its capital and operating cost.

Factor 1a: Adequacy of regulation for an entity to deliver on its mandate including the predictability and the flexibility of the regulations

Score	Criteria / Requirements
1	Existing regulation is largely adequate for the entity to effectively carry out its mandate. The regulations are predictable and do not present unnecessary or unforeseen shocks to the entity's operations. The established regulations are up to date and allow for pursuing business strategy opportunities. The regulations are flexible, and not restrictive; they are designed to protect the entity, as well as the end-user.
2	Regulations governing the entity's operations are generally adequate to enable it to carry out its mandate. The regulations are largely predictable, although they may pose some unforeseen shocks to the entity's operations. The established regulations are current and provide opportunities for the entity to pursue new business strategies. The regulations are mostly not restrictive and largely seek to protect both the entity and the end-user.
3	Existing regulation is inadequate to enable the entity successfully carry out its mandate. The regulations are highly unpredictable and may pose some unforeseen shocks to the entity's operations. The established regulations are obsolete and do not provide opportunities for the entity to pursue new business strategies. The regulations are restrictive and are observed to be more protective of the end-user than of the entity.



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Factor 1b: Rate Setting Flexibility

Score	Criteria / Requirements
1	Rates are often adjusted to reflect changes in external factors. Process for the approval of rates largely is transparent, prompt and not cumbersome. Rate cases are efficient and permit the inclusion of forward-looking costs.
2	Rates are generally adjusted to reflect changes in external factors but may be subject to delays in the approval process. The process for the approval of rates is generally seen to be transparent and prompt, although there may be instances that indicate otherwise. Rate cases may sometimes be seen not to be efficient or may not permit inclusion of forward-looking costs.
3	Rates are not adjusted to reflect changes in external factors. When they do get adjusted, there are lags and delays in the process of approving rates on the part of the regulator or political interference. Rate cases are largely not efficient and do not permit the inclusion of forward-looking costs.

Factor 1c: Sufficiency of Rates

Score	Criteria / Requirements
1	The rates charged by the entity are timely enough to enable recovery of its costs, especially in periods of rising costs. Rates are set at sufficient levels that permit full recovery of costs and a fair return on investments, with minimal challenges to its operations.
2	Rates are set at levels that generally provide recovery of most operating costs, and are generally sufficient to earn returns and attract capital.
3	Rates are set at levels that often fail to provide recovery of costs. Rates are set at levels that largely do not permit full recovery of costs and a fair return on investments.

Factor 1d: Independence of the Regulator

Score	Criteria / Requirements
1	The regulator is largely supportive of the entity, and its decisions are not influenced by political pressure.
2	The regulator generally shows support of the entity in the decisions it makes, and its decisions are generally free of political interference.
3	The regulator often makes decisions that are politically biased and are not in the best interests of the entity.

Management quality

For this indicator, we consider issues regarding, among others, the following:

- The experience of the Board members of the entity (particularly the relevance of their experience to the industry in which the entity operates) and the composition of the Board;



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- The mode in which Management of the entity is appointed and how significant political affiliation is in the process;
- The presence of committees on the Board and the frequency and minutes of their meetings;
- The audit of the entity by reputable auditing firms.

Factor 2a: Entity complying with established regulations in its operations

Score	Criteria / Requirements
1	Management of the entity largely enforces compliance and adherence to established regulations. The entity is seen achieving its mandates and objectives, and its management sees to the execution of its operational and financial strategies.
2	Management of the entity is generally seen enforcing compliance and adherence to established regulations. The entity is mostly able to achieve its mandates and objectives, and its management is generally able to execute its operational and financial strategies.
3	Management of the entity is not seen to be enforcing and adhering to established regulations. The entity is unable to achieve its mandates and objectives, and its management is not able to execute its operational and financial strategies.

Factor 2b: Governance

Score	Criteria / Requirements
1	The entity has a mixed skill set of staff. Management and Board of the entity are experienced in various areas of expertise needed in its operations. The entity has a well-defined governance structure to facilitate its operations. There is largely no political influence in decision making.
2	The entity has a somewhat mixed skill set of staff. Management and Board of the entity have some experience in the various areas of expertise needed in its operations. The entity is seen to have a fairly well-defined governance structure to facilitate its operations. There is generally no political influence in decision making, although there may be occasional cases that indicate otherwise.
3	Entity's staff is not seen to have a diverse set of skills. Decisions of Management and Board of entity demonstrate a lack of or inadequate experience in the areas of expertise needed in its operations. The entity is largely not seen to have a well-defined governance structure to facilitate its operations. Entity's operations and decision-making are influenced by political pressures.



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Factor 2c: Reporting Standards of Annual Reports

Score	Criteria / Requirements
1	The entity has timely and concise reports and audited financial statements, which are in line with International Financial Reporting Standards (IFRS standards) and contain an independent auditor's report. Reports on the entity are published annually and easily accessible on the entity's website.
2	The entity's reports and financial statements partially meet the International Financial Reporting Standards (IFRS standards). Reports on the entity are sometimes not published annually or on a timely basis and may not be easily accessed.
3	The entity's reports and audited financial statements largely do not meet the International Financial Reporting Standards (IFRS standards). Reports on the entity are not published annually on a timely basis and cannot be easily accessed.

Operating environment

Under this factor, the following were considered:

- The entity's ability to take advantage of opportunities within new markets;
- The entity's capacity to allow for expansion in new markets;
- The entity having a competitive advantage over its competitors;
- The entity's ability to maintain or increase its market share over time.

Factor 3a: Market Share and Type

Score	Criteria / Requirements
1	An entity controls a greater share of the market in which it operates and is largely seen consistently increasing the size of its share of the market. The entity operates in a stable market with little volatility, and in more densely populated geographical locations which provide it with a larger customer base.
2	The entity is seen accounting for a reasonably large proportion of the market in which it operates, although the size of its share of the market may be seen fluctuating over time. The entity operates in a generally stable market with some volatility.
3	The entity is not seen to be controlling a greater share of the market in which it operates. The entity is largely seen unable to increase the size of its share of the market. The entity is seen operating in a largely unstable market. The entity operates in a largely sparsely populated geographical area, which reduces its customer base.

Diversification

Key issues considered under this indicator include:

- The ability of the entity to generate revenue from sources;
- The contribution of non-core activities to the revenue of the entity;



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- How diversified is the entity's customer base?
- The ability of the entity to generate its product from sources.

Factor 4a: Input Sources

Score	Criteria / Requirements
1	The entity does not depend on any particular supplier(s) which cannot easily be replaced in order to generate its output. Its production/service centers are diversified across several locations to ensure regular supply of its product/service.
2	The entity is not overly dependent on any particular supplier(s) that it cannot easily replace. It has generally well-diversified production/service centers across several locations.
3	The entity depends on a particular supplier or group of suppliers which it cannot easily replace without incurring high switching costs.

Factor 4b: Income Sources

Score	Criteria / Requirements
1	The entity does not depend on a single local or regional market. The entity derives its revenues and profits from a broader set of products/services. It does not rely on a particular customer(s), and where it does the customer possesses a high credit quality and/or the entity and the customer is highly interdependent.
2	The entity has a broad range of products/services and does not depend on a particular product/service for the majority of its revenues and profits. It does not depend excessively on a single local or regional market. The entity has a generally large customer base, such that the loss of a top customer is unlikely to pose a high risk to its business stability.
3	The entity's products/services line up is somewhat limited, and it derives its profits from a narrow group of products/services. The entity relies heavily on a particular customer or small group of customers and demand for its product/service is low.





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