Factors Influencing Equity Financing within Government Entities in South Africa

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ABSTRACT

Equity financing theorsuggests that firms favour equity financing over debt to mitigate potential external risks and reduce exposure to external scrutiny. The aim of this study is to determine the extent to which various factors influence equity financing decisions within South African government entities. This study investigates the critical factors influencing equity financing decisions within government entities in South Africa. Employing Stata for data analysis, the research utilizes a cross-sectional, quantitative methodology supplemented by questionnaire-based data collection from 51 respondents. The application of Panels corrected standard errors (PCSEs) regression reveals a positive and significant relationship between risk appetite of the company (RAF) and company size (SIZE) with equity financing evidenced by $P = 0.000$ and 0.037, respectively. The links between reliance on internal funds (RIF) and equity financing is positive and slightly significant at 0.051 level. Based on these results, it is recommended that government entities assess their risk appetite and internal financial resources carefully when considering equity financing, ensuring alignment with strategic objectives and market conditions.

Keywords: Equity Financing, Government Entities, South Africa, Panels Corrected Standard Errors, Factors
JEL Classification: M41, M10

1. INTRODUCTION

Equity financing is an integral component of a company's financing structure, which also includes debt financing. Determining the appropriate cost of capital is essential for encouraging investment decisions, as it reflects the returns demanded by investors. For new projects to be advantageous, their expected returns must exceed the cost of capital. This principle ensures that only projects generating higher returns than the financing costs are pursued, thereby enhancing the firm's market value (Gormsen and Huber, 2023). The composition of finance structure depends on the goals of the shareholders. As a crucial subject in business finance, the financing structure significantly impacts company value and performance, especially in competitive and turbulent business environments. Ardalan (2017), Iquiapaza et al. (2007), and Baker and Martin (2011) define the financing structure as the utilisation

of equity and debt financing to fund the acquisition of productive assets that support company operations. This encompasses a range of financial instruments, including short-term debt, long-term debt, preferred equity, ordinary shares, and accumulated earnings, all of which are used to finance operations and capital investments. Scholarly research on financing structure has garnered significant attention since the pioneering work of Modigliani and Miller in 1958 (Oganda, 2023). Despite extensive discussions by financial economists over the past 65 years, no single theory has fully explained the best financing choice. Accordingly, managers face the challenging task of picking financing options that abate costs and risks while maximizing earnings, thereby enhancing company value and shareholder wealth.

Deterioration in company value has detrimental effects on both the company and its stakeholders. A significant example

in the South African government sector occurred in 2023 when the government-owned Post Office was placed into provisional liquidation due to insolvency and an inability to pay its obligations. The government intervened promptly, persuading a court to halt the liquidation proceedings and instead place the Post Office into business rescue. In the same year, ongoing issues within South Africa's network of government-owned and operated ports were highlighted, adding to previous reports of corruption and financial instability in major government entities. Notable cases included South African Airways and the South African Broadcastings Corporation, both teetering on the brink of financial collapse (FAURIE, 2023).

Moreover, serious legal concerns were raised about multi-billion-rand procurements at Transnet and the state power utility Eskom. Leaked information further revealed doubtful associates between the Gupta family, senior politicians, and officials (Gossel, 2017). South African Airways (SAA) had long been mired in corruption, with scandals such as a R375 million (approximately $19,875,000) tender for tires and an R85 million (nearly $4,505,000) contract for airport lounge catering (Jacobs, 2023). In the fiscal year 2023, the board of directors at Transnet, one of the key South African government entities, opted against declaring a dividend. Their decision was grounded in several factors: firstly, management forecasts indicated that Transnet would lack surplus cash in the upcoming 2023/24 financial period. Secondly, the company faces a substantial backlog in sustaining capital investments and pressing operational needs aligned with its strategic objectives. Lastly, there is a notable demand for debt repayment in the near term, influencing the board's cautious stance on dividend distribution (Transnet, 2023).

In many developing and transition economies, government entities are frequently viewed as loss making and inefficient enterprises that strain government finances and exhaust limited resources (Marimuthu, 2021). Despite this, there is a scarcity of research on this topic. Among the few studies available are those on the financial structure of government entities in South Africa, conducted by Marimuthu (2019) and Marotholi (2018). The relationship between executive compensation and financial performance in South African state-owned entities, has been covered by Bussin and Carlson (2020), Marotholi (2018), and Marimuthu (2019). Another research area that has garnered attention is the effect of working capital management on the financial performance of a State-Owned Enterprise in South Africa, studied by (Ntuli and Nzuza, 2022).

Marimuthu (2019) stated that studies investigating factors influencing the financial structure of a firm have shown that company size, age, asset tangibility, profitability, growth, corporate risk, tax rate, gross domestic product, inflation, and interest rates all have an impact. Most of these studies used secondary data extracted from financial statements. However, the factors influencing equity financing in government entities in South Africa, when using a questionnaire instrument for data collection, remain largely unexplored by previous scholars. Despite reports of these entities facing significant financial challenges, their inability to secure financing from private lenders continues to strain South African government budgets. Annually, these entities often require government bailouts, further tightening fiscal constraints. A study delving into this area would provide valuable insights and contribute to the existing body of knowledge by introducing new theories and understanding of the financial dynamics at play within government entities in South Africa.

2. LITERATURE REVIEW

2.1. Equity Financing
Equity financing within South African government entities involves the Department of Public Enterprises, which oversees funds on behalf of public sector employees, including pension funds. This department invests in various sectors to foster economic growth and development initiatives, as observed in the case of Transnet (2023), as an example. Equity issuance can occur through two primary methods. Firstly, through an initial public offering, where a new entity offers its shares to the public for the 1st time. Secondly, through a seasoned issue, where established entities sell authorized but previously unissued shares to raise additional funds (Oganda, 2023). Shareholders receive dividends when the entity generates profits and distributes a portion to them. However, financial theory suggests that equity financing is often the costliest option. Therefore, entities tend to resort to it selectively, typically when their shares are overrated by the market. In such cases, the benefits of issuing shares offset the associated costs (Aljughaiman et al., 2022).

The two main types of equity shares are ordinary shares and preference shares, each offering different rights and priorities in terms of dividends and voting power. An ordinary share grants shareholder voting rights in company decisions and potential dividends if approved by the board of directors, thereby exposing them to higher risk and reward potential compared to other share classes. In contrast, preference shares are considered equity if the company has the option to redeem them, typically lacking voting rights but prioritizing dividend payments. In the event of liquidation, preference shares hold precedence in asset distribution, making them a relatively stable investment choice relative to ordinary shares. Equity can be assessed by calculating the ratio of total equity to total assets, derived from the statement of financial position. This ratio demonstrates the extent to which assets are financed through equity. An equity ratio below 0.50 suggests a company is heavily funded by debt, whereas a ratio of 0.50 or higher signifies that equity shareholders hold greater control and are less inclined to use debt financing (Alvian and Munandar, 2022).

2.2.1. Equity financing theories
This paper is based on theories established by Modigliani and Miller (1958). While Modigliani and Miller are renowned for their four conflicting theories on equity, this study primarily focuses on the Agency theory, Tax-based theory, the Pecking order theory, and the Signalling theory.

2.2.1.1. Agency theory
Agency theory, introduced by Meckling and Jensen (1976), explains the differing behaviours of shareholders (principals) and executives (agents). It posits that shareholders delegate daily

management to managers, expecting them to act in their best interests. However, managers often pursue their own interests, leading to conflicts and agency costs. These costs arise from shareholders' efforts to monitor and prevent managerial misuse of power (Nguyen et al., 2022; Ahmed et al., 2023). The agency costs are the costs incurred by shareholders to monitor, supervise and try to prevent agents from abusing of powers (Sdiq and Abdullah, 2022). The significance of this theory in the study, is because it is common for state owned enterprise agents to act on behalf of their own interests other than the interests of the principals. This theory is significant in this study as state-owned enterprise agents frequently prioritize their own interests over those of the principals (Nguyen et al., 2022).

2.2.1.2. Tax based theory
The tax-based theory of financing strategy, also known as the Static trade-off theory, as proposed by Barnea et al. (1981) and (Baxter, 1967), suggests that the best financing strategy is achieved when the net tax benefits of debt financing offset the associated leverage costs assuming the firm's assets and investment decisions remain unchanged. According to this theory, issuing shares for equity financing is seen as a deviation from the ideal structure and is thus discouraged. Firms adhering to the Tax-based theory aim for a specific debt-to-value ratio and make gradual efforts to attain it. Managers are generally hesitant to issue equity if they believe it is undervalued in the market. Consequently, investors often view equity issuances as indicative of fair or overpriced equity, leading to a negative reaction. As a result, management tends to avoid issuing equity (Myers, 1977).

2.2.1.3. The pecking order theory
The Pecking order theory, also referred to as the Information asymmetry theory, was introduced by Myers (1977) and further developed by Myers and Majluf (1984) This theory suggests that firms follow a specific order of preference when financing new investments: They first use internal funds, then resort to debt, and finally consider issuing new equity (Raude et al., 2015; Pratiwi and Yulianto, 2022). This preference is driven by the fact that internal funds do not involve flotation costs and do not necessitate the disclosure of sensitive financial information, such as potential investment opportunities and expected gains. The theory emphasizes the problem of under-pricing stemming from information asymmetry, where investors have less knowledge about the company's expected cash flows compared to its management (Pratiwi and Yulianto, 2022). This disparity leads investors to believe that equity is issued only when it is overpriced, causing the new equity to be sold at a discount and effectively transferring wealth from existing shareholders to new investors. To avoid this scenario, companies prefer to rely on internally generated funds, such as accumulated profit from the previous years (Raude et al., 2015).

2.2.1.4. Signalling theory
The signalling factor's impact, which is closely related to the under-pricing issue of equity shares, is a central topic in the Pecking order theory. When a company opts to issue equity shares rather than raising a debt to finance new business opportunities, investors regularly perceive that as a bad signal. Managers, who

possess more comprehensive information about the company than investors, may choose to issue equity shares only when it is overpriced, prompting a negative reaction from the market (Raude et al., 2015; von Deimling et al., 2022).

2.2.2. Empirical studies
2.2.2.1. Factors influencing equity financing
A study to examine the equity financing constraints and corporate capital structure: A model conducted by Wang and Zhu (2013) using mathematical derivation method to get some basic conclusions, found that the greater the uncertainty of using equity financing leads to lower optimal capital structure. A study by Mokhova et al. (2018) utilized a literature review to investigate the internal factors affecting the equity capital. The findings reveal that accounting information significantly influences a company's decision. The quality and quantity of this information can either reduce or increase information asymmetry, subsequently impacting the cost of the capital structure. A study by Tuti and Jaenal (2020) utilized the Error Correction Model (ECM) method to analyse the factors influencing equity financing at Bank Syariah Mandiri. The results indicated that the Bank Indonesia Rate was the most significant factor affecting equity financing.

A study conducted by Singh and Yadav (2016) examined the factors influencing investor decisions in equity shares, specifically focusing on 100 investors from Moradabad city, Uttar Pradesh. The research, which also considered gender differences, revealed that investor decisions are influenced by techniques such as technical and financial analysis of companies including the fundamental analysis of the broader economy. In exploring the factors that impact equity financing, a study analyzed the efficiency of equity financing in 208 listed companies within strategic emerging industries from 2014 to 2018, utilizing the DEA-Malmquist model and Tobit analysis. The findings indicated that key factors affecting equity financing include big data indicators, leverage, assets, and sub-industry network attention (Singh and Yadav, 2016).

The study to investigate the factors affecting investment decisions in equity shares among retail investors in Kenya was conducted by Ngahu (2017). Using purposive random sampling, the study selected five retail investors from each firm, resulting in a sample size of 80 respondents. Data was gathered through questionnaires and analyzed using descriptive and inferential methods with SPSS. The regression analysis revealed that share price and stakeholders' opinions have a significant positive impact on investment decisions. While studying the determinants of capital structure in Pakistan, Ahmed et al. (2013) found that dividends, growth, and professional investment management are key factors in selecting equity investments. Additionally, historical dividend payments can significantly influence equity investment decisions (Kadiyala and Rau, 2004).

A study conducted in a retail industry by Bennet et al. (2012) noted five factors that influenced retail investors' attitude towards investing in equity stock markets. The study determined that five factors which included investors' tolerance for risk, media focus on the stock market, strength of the economy, political stability and government's business policies were very influential over

retail investors' attitude towards investing in certain equity stocks. rewrite differently and citation at end. In a study within the retail industry, Bennet et al. (2012) identified several factors that significantly impact retail investors' attitudes toward investing in equity stock markets. These factors include investors' risk tolerance, media attention on the stock market, economic robustness, political stability, and government business policies. These elements collectively shape how retail investors perceive and decide to invest in specific equity stocks.

A study found that equity financing is less appealing to small businesses compared to debt financing, which offers the advantage of tax shield benefits on interest payments. For small businesses, equity financing is often prohibitively expensive, making it more suitable for large companies with sufficient funds. Consequently, equity financing tends to be more prevalent among larger firms (Ngahu, 2017). This study is supported by another study that investigated the link between equity financing strategy and the performance of small medium enterprises (SMEs) in Kakamega Municipality, Kenya, using a descriptive survey research design. Data was collected through questionnaires with dichotomous questions and interviews with top management. The results indicated a strong correlation between equity financing strategy and SME performance, revealing that SMEs in Kakamega were financially starved (Raude et al., 2015).

In a study investigating the factors influencing debt and equity financing among young, innovative SMEs in Germany, it was found that the general risk indicator, age, is weakly significant in the basic model. However, company age loses its explanatory power when an intrinsic risk indicator is included in the analysis (Schäfer et al., 2004). This means that as a company matures, it begins to recognize the advantages of debt financing over equity financing, primarily due to the latter's higher costs. Consequently, mature companies increasingly favour debt financing, appreciating its relative cost-effectiveness compared to the expensive nature of equity financing.

2.2.3. Government entities in South Africa

State-owned enterprises are also referred to as public entities, are independent bodies wholly or sometimes partially owned by government. Their roles include to perform specific functions and operate in accordance with a particular Act. In South Africa, in line with international trends, the transformation of agencies into state-owned corporations, was presented in some sectors to encourage inclusive service delivery mainly post 1994 the year in which democratic state began. Internationally, using public authorities rather than full privatization is seen as taking advantage of private-sector efficiencies while maintaining public accountability. When examining the list of national entities in South Africa, it is evident that many have a direct impact on urban growth and development. The National Development Plan (NDP) highlights that despite government efforts to transform it companies, there has been insufficient emphasis on the developmental potential of government entities. According to the NDP, the government has not provided adequate support for built-environment functions such as housing, government-owned land, and transport infrastructure. While government entities are vital in delivering essential services to communities, their performance is often poor (Ovens, 2013). Issues include inadequate investment levels and lagging maintenance programs. The NDP recommends that the performance of government entities could be enhanced through greater cooperation and competition, as well as addressing institutional and reporting structure challenges and the difficulty in implementing innovations (Nzimakwe, 2023; Gumede and Asmah-Andoh, 2016).

3. METHODOLOGY

Research design comprises of the combination of collection and analysis of data proceedings for the research study to achieve its goals and objectives by answering all the research questions. The research design employed in this study is quantitative and cross-sectional as the study investigates the perceptions of staff on the effects of investment decisions to improve financial performance. The quantitative research design was used, where the collection of data was interpreted in numerical form using questionnaires, and data analysis procedures included the use of tables and figures forming statistical variables to generate numerical data, which was then analyzed and interpreted (Borgobello et al., 2019) using Stata. Questionnaire was the primary tool utilized in the study for the collection of data. The target population was 55 946 staff members working at a selected South African government entity. Of this population, only 69 employees were employed at the finance division. Due to the small number of finance population, all 69 staff members were sampled for this study. Non-probability, convenience sampling was used as the staff members selected by the researcher were willingly available and keen to partake in the research study. The questionnaires were self-administered by the researcher, with <20% that were sent via emails due to the unavailability of some of the respondents. Their email addresses were obtained from the company official website. Out of 69 respondents, only 51 managed to complete and return the questionnaires.

3.1. Model Specification

We employed given the possibility of the existence of heteroskedasticity and serial correlation in the error terms, Panel-Corrected Standard Errors (PCSEs) to estimate the econometric model. To provide consistent and effective model parameter estimation, PCSEs is selected to address the heteroskedasticity and serial correlation in the data (Greene, 2018; Wooldridge, 2010) as well as the issue of cross-dependence. PCSEs is also suitable for the study data structure of cross-sectional less than time dimensions. Furthermore, in addition to guaranteeing that the computed coefficients are impartial and effective within the given error structure, this method enables strong statistical inference. Before applying the PCSEs, the study conducted a series of preliminary analyses, including descriptive statistics, factor analysis, Pearson correlation, fixed and random effects models, the Hausman test, and the Pedroni test for cointegration. The model's specifications are as follows:

$$Y_i = \beta_0| + \beta_1 X1_i| + \beta_2 X2_i| + \cdots + \beta_k Xk_i + \varepsilon_i| \tag{1}$$

where Y_i represents the dependent variable, $X1_i$, $X2_i$, $\cdots Xk_i$ denote the independent variables, β_0, β_1, $\cdots$, β_k are the coefficients to be estimated, and ε_i is the error term.

$$Equity/F_i = \beta_0 + \beta_1 RIF_i + \beta_2 RAF_i + \beta_3 EGC_i + \beta_4 CST_i + \beta 5SIZE_i + \beta_6 ExtS_i + \epsilon_i \quad (2)$$

An explanation of these variables in the study model, is found in Table 1.

4. STUDY FINDINGS

4.1. Hypothesis 1
- H0: There is no relationship between RIF and equity financing
- H1: There is a relationship between RIF and equity financing.

As shown in Table 9, the P = 0.051 which is slighly above 0.05, hence the null hypothesis is rejected that at a level of significance of 5%, there is a relationship between the variables.

4.2. Hypothesis 2
- H0: There is no relationship between RAP and equity financing
- H1: There is a relationship between RAP and equity financing.

As shown in Table 9, the P = 0.000 which is <0.05, hence the hypothesis is accepted which indicates that at a level of significance of 5%, there is a relationship between the variables.

4.3. Hypothesis 3
- H0: There is no relationship between EGC and equity financing
- H1: There is a relationship between EGC and equity financing.

As shown in Table 9, the P = 0.691which is >0.05, hence the null hypothesis is accepted which indicates that at a level of significance of 5%, there is no relationship between the variables.

4.4. Hypothesis 4
- H0: There is no relationship between CST and equity financing
- H1: There is a relationship between CST and equity financing.

As shown in Table 9, the P = 0.894 which is >0.05, hence the null hypothesis is accepted which indicates that at a level of significance of 5%, there is no relationship between the variables.

4.5. Hypothesis 5
- H0: There is no relationship between company SIZE and equity financing
- H1: There is a relationship between company SIZE and equity financing.

As shown in Table 9, the P = 0.037 which is <0.05, hence the null hypothesis is rejected which indicates that at a level of significance of 5%, there is no relationship between the variables.

4.6. Hypothesis 6
- H0: There is no relationship between ExtS and equity financing
- H1: There is a relationship between ExtS and equity financing.

As shown in Table 9, the P = 0.140 which is >0.05, hence the null hypothesis is accepted which indicates that at a level

Table 1: Study variables

Variables	Measurement
Dependent variable (Y):	
Equity financing (Equity/F)	Questionnaire statement
Independent variables (X):	
Reliant on internal funds (RIF)	Questionnaire statement
Risk appetite of the firm (RAP)	Questionnaire statement
externally generated cash (EGC)	Questionnaire statement
Setting capital structure based on theory (CST)	Questionnaire statement
Size of the company (SIZE)	Questionnaire statement
External stakeholders' expectations (ExtS)	Questionnaire statement

Table 2: Descriptive statistics

Variable	Obs	Mean	Std. dev.	Min	Max
Equity/F	51	2.470588	0.7308335	1	4
RIF	51	2.980392	0.5473645	2	4
RAP	51	2.843137	0.5787071	2	4
EGC	51	3.411765	0.5357787	2	4
CST	51	2.921569	0.4401426	2	4
SIZE	51	3.078431	0.3920784	2	4
ExtS	51	3.215686	0.4610304	2	4

Table 3: Factor analysis

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Uniqueness
Equity/F	0.6910	0.2423	−0.0370	0.0444	0.4605
RIF	0.2305	0.0014	0.3789	0.0456	0.8012
RAP	0.5572	0.2466	−0.2594	0.0265	0.5608
EGC	−0.4945	0.1318	−0.1488	0.0873	0.7083
CST	−0.2900	0.4290	0.1931	0.0452	0.6925
SIZE	0.2402	0.4408	0.0965	−0.0759	0.7329
ExtS	−0.5274	0.4199	−0.0796	−0.0352	0.5380

of significance of 5%, there is no relationship between the variables.

As indicated in Table 2, the descriptive statistics for the dataset, comprising 51 observations, provide insights into the central tendency and variability of the variables related to equity financing (Equity/F) and various influencing factors (RIF, RAP, EGC, CST, SIZE, ExtS). The mean value for Equity/F is 2.47 with a standard deviation of 0.73, indicating that on average, equity financing is moderately utilized, with some variability across observations. RIF has a mean of 2.98 and a standard deviation of 0.55, suggesting a relatively high level of risk influence with moderate variability. RAP shows a mean of 2.84 and a standard deviation of 0.58, reflecting an agreement of risk appetite as a factor influencing equity financing. EGC, with the highest mean of 3.41 and a standard deviation of 0.54, indicates an agreement that the use of externally generated cash influence equity financing decision. Setting capital structure based on theory (CST) has a mean of 2.92 and a standard deviation of 0.44, pointing to its moderate influence on equity financing decision. SIZE has a mean of 3.08 and a standard deviation of 0.39, indicating that the company size has an influence on equity decision. Lastly, ExtS has a mean of 3.22 and a standard deviation of 0.46, suggesting there is an agreement on the influence of external stakeholders on the decision to finance the company through equity capital.

Table 4: Pearson correlation

Variables	Equity/F	RIF	RTP	EGC	CST	SIZE	ExtS
Equity/F	1.0000						
RIF	0.1735	1.0000					
	0.2233						
RAP	0.5563*	−0.0099	1.0000				
	0.0000	0.9450					
EGC	−0.3005*	−0.1765	−0.1745	1.0000			
	0.0322	0.2153	0.2206				
CST	−0.0695	0.0765	−0.1278	0.2245	1.0000		
	0.6280	0.5936	0.3715	0.1132			
SIZE	0.2874*	0.1005	0.2316	−0.1568	0.1523	1.0000	
	0.0409	0.4829	0.1020	0.2718	0.2862		
ExtS	−0.3073*	−0.2207	−0.1705	0.3620*	0.3807*	0.1258	1.0000
	0.0283	0.1197	0.2316	0.0091	0.0058	0.3789	

Table 5: Fixed effects

EEF	Coefficient	Std. err.	t	P>t	95% conf.	Interval
RIF	0.2937652	0.1575728	1.86	0.069	−0.0244595	0.61199
RAP	0.4672209	0.1617656	2.89	0.006	0.1405286	0.7939131
EGC	−0.0810227	0.1627715	0.50	0.621	−0.4097464	0.247701
SIZE	0.2939566	0.2079051	1.41	0.165	−0.1259163	0.7138294
ExtS	−0.2901166	0.1858701	1.56	0.126	−0.6654889	0.0852557
_cons	0.5711087	1.127787	0.51	0.615	−1.706504	2.848721
sigma_u	0.34515232					
sigma_e	0.52477537					
rho	0.30196272			(fraction of variance due to u_i)		

Table 6: Random effects

EEF	Coefficient	Std. err.	z	P>z	95% conf.	Interval
RIF	0.1333231	0.1583787	0.84	0.400	−0.1770935	0.4437398
RAP	0.5879796	0.1520463	3.87	0.000	0.2899744	0.8859848
EGC	−0.1432158	0.1717331	0.83	0.404	−0.4798064	0.1933748
SIZE	0.3299171	0.2277065	1.45	0.147	−0.1163794	0.7762136
ExtS	−0.3013736	0.2044682	1.47	0.140	−0.7021239	0.0993767
_cons	0.8436406	1.20515	0.70	0.484	−1.51841	3.205692
sigma_u	0					
sigma_e	0.52477537					
rho	0			(fraction of variance due to u_i)		

Table 7: Results of Hausman's Test

Variables	(b) fe	(B) re	(b−B) Difference	sqrt (diag (V_b-V_B)) S.E.
RIF	0.2937652	0.1333231	0.1604421	
RAP	0.4672209	0.5879796	−0.1207587	0.0552271
EGC	−0.0810227	−0.1432158	0.0621931	
SIZE	0.2939566	0.3299171	−0.0359605	
ExtS	−0.2901166	−0.3013736	0.011257	

Chi2 (5) = (b−B)'[(V_b−V_B)^(−1)](b−B)= 1.45 Prob>Chi2=0.9185

The factor analysis reveals that Factor 1 is the most significant factor influencing equity financing (Equity/F), with a strong positive loading (0.6910). Risk tolerance (RAP) and external stakeholders (ExtS) also show notable relationships with Factor 1, while firm size (SIZE) and cost (CST) are more influenced by Factor 2. The uniqueness values indicate that several variables retain a significant portion of variance not explained by the common factors, highlighting the complexity and distinctiveness of each variable in the context of equity financing.

Table 8: Pedroni test for cointegration

Stats	Statistic	value
Modified Phillips–Perron t	3.5843	0.0002
Phillips–Perron t	−2.1394	0.0162
Augmented Dickey–Fuller t	−3.6754	0.0001

Pearson correlation coefficient was used to show the strength and direction of association among the study variables. The results reveal that the variables do not suffer from issues of multicollinearity as only 2 independent variables that displayed to be corelated and those are EGC with ExtS and CST with ExtS (Tables 3 and 4).

The hypothesis testing for the Hausman test is that:
- Null hypothesis: Random-effects model is the appropriate model to be adopted (Table 5).
- Alternative hypothesis: Fixed effects model is the appropriate model to be adopted (Table 6).

Table 7 presents the Hausman test results, which indicate a significant probability value at the 5% level. This significance

Table 9: Panels corrected standard errors

Equity/F	Coefficient	Std. err	z	P>z	95% conf.	Interval
RIF	0.2139224	0.1097423	1.95	0.051	−0.0011686	0.4290134
RAP	0.5606211	0.1133011	4.95	0.000	0.3385549	0.7826872
EGC	−0.0454442	0.1142659	0.40	0.691	−0.2694012	0.1785128
CST	0.0218942	0.1648042	0.13	0.894	−0.301116	0.3449045
SIZE	0.3387085	0.1624585	2.08	0.037	0.0202957	0.6571213
ExtS	−0.2221478	0.1506107	1.47	0.140	−0.5173394	0.0730437
Rhos	−0.2032187	0.5524509	0.3410937	0.0057066	0.7496067	

suggests that the null hypothesis, which posits that random effects are appropriate, should be accepted. Therefore, the alternative hypothesis, asserting that fixed effects are suitable, should be rejected. Therefore, the study will focus on discussing the random effects results.

The results indicated that risk appetite of the company (RAP) positively and significantly impact equity financing decisions within government entities in South Africa. Specifically, the random-effects model produced positive coefficients of 0.4672 significant at the 5% level. This means that the company's willingness to take risks (referred to as "risk appetite") has a positive and significant influence on its decisions regarding equity financing. In other words, as the company's risk appetite increases, it is more likely to make decisions in favour of raising funds through equity financing. However, other control variables, such as RIF, EGC, SIZE, and ExtS, did not show a significant association with equity financing.

Robust statistical tests were employed to determine whether the factors influence equity financing. The primary method used was Correlated panels corrected standard errors (PCSEs). Prior to conducting PCSEs, the study performed several preliminary tests, including the Kao test for cointegration, the Im–Pesaran–Shin unit-root test, the Wooldridge test for autocorrelation in panel data, and the Breusch–Pagan/Cook–Weisberg test for heteroskedasticity. The results from these statistical tests are discussed in Table 6.

The hypothesis testing for the Pedroni test for cointegration is that:
H0: No cointegration
Ha: All panels are cointegrated

The results show that Modified Phillips–Perron t, Phillips–Perron t, and Augmented Dickey–Fuller t show highly significant cointegration with p-values well below the common significance level of 0.05. These results suggest strong evidence of cointegration between risk appetite and equity financing decision (Table 8).

The P = 0.051, which is slightly above the conventional threshold of 0.05 for statistical significance. This suggests that the relationship between reliance on internal funds (RIF) and equity financing is marginally significant. Therefore, there is a positive, although marginally significant, impact of RIF on equity financing decision.

The P = 0.000, indicating a highly statistically significant relationship between for risk appetite of the company (RAP) and equity financing. This result strongly supports the conclusion that higher risk tolerance significantly increases equity financing decision.

The P = 0.037, which is below the 0.05 threshold, signifying a statistically significant relationship between the company size (SIZE) and equity financing. This result suggests that company size positively impacts equity financing decisions.

5. DISCUSSION

The coefficient for reliant on internal funds (RIF) is 0.2139224, indicating that, all else being equal, a one-unit increase in internal reliance on internal funds is associated with an increase of approximately 21.4% in equity financing option. The P = 0.051, which is slightly above the conventional threshold of 0.05 for statistical significance. This suggests that the relationship between RIF and equity financing is marginally significant. The confidence interval ranges from slightly negative (−0.0011686) to positive (0.4290134), which adds a degree of uncertainty to this estimate. In summary, RIF appears to have a positive, although marginally significant, impact on equity financing option. These results are slightly different from the Pecking order and Signalling theories that postulate that investors believe that equity is issued only when it is overpriced, causing the new equity to be sold at a discount and effectively transferring wealth from existing shareholders to new investors (Raude et al., 2015). Therefore, in order to avoid this scenario, companies prefer to rely on internally generated funds. This suggests that government entities are inclined to seek funding from debt sources rather than relying on internal equity, likely due to the financial advantages such as tax reliefs. Perhaps, this strategic shift aims to counter the historic reputation of public entities having complacent employees. The obligations and covenants associated with debt funding would exert pressure on managers and motivate employees to perform more diligently to meet these financial requirements and ultimately improve financial performance of the entity as a whole.

The coefficient for risk appetite of the company (RAP) is 0.5606211, suggesting that, all else being equal, a one-unit increase in RTP is associated with a significant increase of approximately 56.1% in equity financing option. The P = 0.000, indicating a highly statistically significant relationship between RTP and equity financing. The confidence interval ranges from 0.3385549 to 0.7826872, which is entirely positive, reinforcing the robustness and reliability of this estimate. This result strongly supports the conclusion that higher risk tolerance (RTP) significantly increases equity financing decision. These findings are consistent with the Tax-based theory proposed by Barnea et al. (1981) and (Baxter, 1967), which posits that debt is the optimal financing strategy. This theory argues that resorting to equity financing signals a high-risk appetite on the part of management, which is theoretically

perceived as a departure from the ideal financial structure. The use of debt not only leverages tax benefits through deductible interest payments but also imposes financial discipline on management, fostering more prudent financial management and operational efficiency. Thus, equity financing is seen as a disadvantageous and strategically incorrect option compared to debt financing.

The coefficient for company size (SIZE) is 0.3387085, indicating that, all else being equal, a one-unit increase in SIZE is associated with an increase of approximately 33.9% in equity financing option. The P = 0.037, which is below the 0.05 threshold, signifying a statistically significant relationship between SIZE and equity financing. The confidence interval ranges from 0.0202957 to 0.6571213, which is entirely positive, supporting the conclusion that larger companies are more likely to engage in equity financing. This result suggests that company size (SIZE) positively impacts equity financing decisions. These findings are consistent with prior research by Ngahu (2017) and Raude et al. (2015), which concluded that equity financing for small businesses often signifies financial distress. In the context of government entities, which are large compared to small businesses, the strategy of using equity financing is perceived to offer both financial and non-financial benefits. These benefits include maintaining government ownership and potentially enhancing financial stability. This suggests that for large government entities, equity financing is not only feasible but also strategically advantageous.

Thus, the study presents the following theoretical model outlining the factors that influence equity financing decisions within South African government entities.

The model is

$$Y_{it} = f(X_{it})$$

Where, Y_{it} represents a response variable which in this study is the equity financing (Equity/F). represents regressors, which are reliant on internal funds (RIF), risk appetite of the company (RAP), and company size (SIZE).

Therefore,

$$Equity/F_{it} = c_0 + \beta_1 \sum_{i=1}^{n} RAP_{it} + \beta_2 \sum_{i=1}^{n} SIZE_{it} - \beta_3 \sum_{i=1}^{n} RIF_{it} \qquad (4)$$

And the *a priori* expectation is that $\beta_1, \beta_2 > 0, \beta_3 < 0$.

6. CONCLUSION

The study aim was to determine the extent to which various factors influence equity financing decisions within South African government entities. Based on the findings discussed, several conclusions can be drawn regarding the factors influencing equity financing decisions within the South African government entities. Firstly, the study reveals that reliance on internal funds shows a marginally significant positive association with opting for equity financing. This suggests that while internal resources play a role, government entities may still consider external financing options like equity to meet strategic financial needs, albeit with cautious

consideration of market conditions and shareholder expectations. Secondly, the study underscores the significant influence of risk appetite on equity financing decisions. A higher risk tolerance among government entities correlates strongly with increased reliance on equity financing. This finding aligns with theories such as the Tax-based theory, which posits that equity financing may signal a willingness to take on higher risks, contrasting with the preference for debt to leverage tax advantages and maintain financial discipline.

In conclusion, while larger government entities may utilize equity financing to capitalize on their size and stability, the decision-making process is nuanced by factors such as internal resource availability and risk tolerance. These findings propose that government entities weigh financial advantages, market conditions, and strategic goals when choosing between equity financing options. By understanding these dynamics, it is recommended that government entities assess their risk appetite and internal financial resources carefully when considering equity financing, ensuring alignment with strategic objectives and market conditions.

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