



## Analysis of financial risk management practices and performance of horticultural firms

Dr. Allan Kuria

Department of Business Management, School of Business Management and Economics, Dedan Kimathi University of Technology, Nyeri, Kenya

### Abstract

**Purpose:** This study aimed to examine the impact of financial risk management practices on the performance of horticultural firms in Kenya. The research sought to identify the effectiveness of risk identification, assessment, control mechanisms, and diversification strategies in improving organizational performance.

**Materials and Methods:** A descriptive survey design was adopted, targeting 140 respondents from 35 horticultural firms, including accountants, customer relations officers, human resource officers, and production managers. Data collection utilized structured questionnaires distributed and collected through a drop-and-pick system. Statistical analysis included descriptive statistics and bivariate linear regression to assess the relationship between financial risk management practices and organizational performance.

**Findings:** The study revealed a statistically significant positive relationship between financial risk management practices and the performance of horticultural firms, with a regression coefficient of 0.376 and a p-value of 0.000. Key findings highlighted that 71.6% of respondents agreed their firms analyzed risks to assess impacts, and 69.9% indicated the presence of robust risk control mechanisms. However, only 49.6% reported having a regularly reviewed risk register. The findings underscore the critical role of financial risk management in mitigating financial volatility and optimizing organizational outcomes.

**Unique Contribution to Theory, Policy and Practice:** This study reinforces Contingency Theory, emphasizing the need for tailored financial risk management strategies based on organizational and environmental contexts. For policymakers, the findings highlight the importance of fostering robust financial risk management frameworks and offering incentives to horticultural firms for implementing effective risk control mechanisms. Practically, the results underscore the necessity for horticultural firms to establish comprehensive risk registers, diversify projects, and adopt proactive risk management approaches to enhance sustainability and performance.

**Keywords:** Financial risk management practices, performance of horticultural firms, risk identification

### Introduction

Financial risk management is a cornerstone of organizational success, particularly in sectors like horticulture that are prone to economic and environmental volatility. It encompasses the identification, assessment, and mitigation of risks, including credit risks, liquidity risks, interest rate fluctuations, and currency exchange risks. Effective financial risk management enables firms to safeguard assets, maintain liquidity, and optimize profitability, even in uncertain market conditions (Saleem & Abideen, 2011) <sup>[11]</sup>. This is especially relevant in horticultural farming, a subset of the agribusiness industry that involves the large-scale cultivation of perishable crops such as fruits, vegetables, and flowers (Tonui & Kimani, 2016) <sup>[12]</sup>.

Horticultural firms face significant challenges despite their crucial role in the local economy. The sector is characterized by heavy reliance on both domestic and international markets, which are vulnerable to economic disruptions and regulatory changes. Poor financial risk management has contributed to declining export values, reduced profitability, and business closures, hampering the growth of the industry (KNBS, 2022; County Government of Laikipia, 2022). These performance challenges emphasize the need for enhanced financial risk management practices to address potential vulnerabilities and improve sustainability.

Extensive literature underscores the importance of risk management in improving organizational performance.

Effective financial risk management reduces financial volatility and enhances decision-making, enabling firms to mitigate losses and capitalize on opportunities (Hopkin, 2018) <sup>[2]</sup>. Previous studies highlight that well-implemented risk management strategies can improve liquidity, ensure stable cash flow, and optimize financial resource allocation, leading to better organizational outcomes (McNeil *et al.*, 2015) <sup>[7]</sup>. However, limited research has focused on the specific impact of these practices within the context of horticultural firms in Kenya, where unique challenges such as climatic variability and market dependency exacerbate risks.

Contingency Theory emphasizes that no single management practice universally guarantees success; instead, the optimal strategy depends on contextual factors (Otley, 2016) <sup>[9]</sup>. Applied to financial risk management, this theory posits that the effectiveness of risk management practices varies based on organizational circumstances, including environmental, economic, and structural factors. For horticultural firms, Contingency Theory suggests that tailored approaches to risk identification, assessment, and mitigation are necessary to address specific challenges. The theory provides a foundation for analyzing how firms' financial risk management practices influence their performance under varying conditions.

This study aims to bridge the knowledge gap by analyzing the financial risk management practices employed by horticultural firms and their impact on organizational performance. The findings will offer actionable insights into

optimizing risk management strategies to enhance resilience, stabilize operations, and drive sustainable growth in this vital sector.

**Materials & Methods/ Methodology**

This study adopted a descriptive survey design to explore the financial risk management practices and performance of horticultural firms in Kenya. The descriptive survey method was chosen for its ability to provide a detailed snapshot of current conditions through the collection of both qualitative and quantitative data (Kothari, 2004; Mugenda & Mugenda, 2003) [5, 8]. The target population included 140 respondents comprising accountants, customer relations officers, human resource officers, and production managers from 35 horticultural firms (Horticultural Crops Directorate, 2022). Since the population size was manageable, a census approach was utilized to include all respondents.

Structured questionnaires were the primary data collection tool due to their objectivity and ability to elicit thorough responses while minimizing researcher bias (Kothari, 2004; Krishnaswamy *et al.*, 2006) [5, 6]. Questionnaires were distributed and collected through a drop-and-pick system, with follow-ups conducted to ensure a high response rate.

Data were analyzed using statistical software, applying both descriptive and inferential methods. The relationship between financial risk management practices and performance was assessed using multiple linear regression analysis with the model

$$L_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where L= Performance

$\beta_0$ = Intercept

$X_1$ = Financing Practices

$X_2$ = Liquidity Management Practices

$X_3$ = Financial Risk Management Practices

$X_4$ = Investment Practices

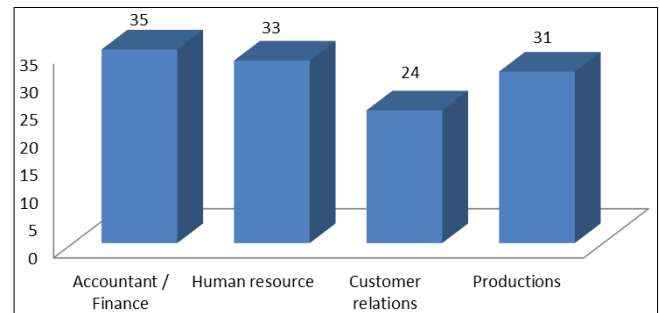
$\beta_1, \beta_2, \beta_3, \beta_4$ = Coefficients

e= error term

**Results and discussion**

Thirty-five horticultural firms were involved in the study targeting accountants / finance officer, customer relation officers, human resource officers and production managers in every firm. Figure 1 indicate that out of all the respondents in each category, thirty-five respondents were

all accountants/ finance officer responded followed by human resource and production officers. Customer relations had the lowest response which can be attributed to some horticultural firms not having an autonomous customer relationship office / marketing department.



**Fig 1:** Number of respondents per functional areas

**Descriptive statistics for financial risk management practices**

Table 1 presents the responses from financial risk management that were analyzed using descriptive statistical analysis. The results shows that slightly above average 56.1% agreed that the firm has put in place mechanism of identifying risks, a higher percentage 71.6% agreed that the firm normally analyses risk to assess their impact, 69.9% agreed that the firm has an elaborate risk control mechanism to manage risks, half of the respondents indicated that 49.6% horticultural firms do not have risk register which is reviewed regularly while 71.5% agreed that firm undertakes a number of project in order to diversify risk. Iyakaremye (2015) [3] noted that due to the ever-changing nature of the market, businesses of all sizes are constantly exposed to a wide range of financial risks.

These finding points out the existence risk control mechanism to manage risks as well as mechanism of identifying risks as described by Saleem and Abideen (2011) [11], better decision making is achieved by the risk management process which includes: identification; analysis; assessment; monitoring; and control. According to McNeil *et al.* (2015) [7], financial risk management affects performance by allowing a business to reduce the likelihood of losses caused by financial risks such as currency fluctuations and interest rate changes.

**Table 1:** Descriptive statistics for financial risk management practices

	SD	A	N	A	SA	Mean	Std Dev
The firm has put in place mechanism of identifying risks	0.0%	4.9%	39.0%	48.0%	8.1%	3.5935	.7110
The firm normally analyses risk to assess their impact	0.0%	8.9%	19.5%	66.7%	4.9%	3.6748	.7071
The firm has an elaborate risk control mechanism to manage risks	0.0%	8.1%	22.0%	65.0%	4.9%	3.6667	.6974
The firm has a risk register which is reviewed regularly	26.0%	23.6%	26.0%	9.8%	14.6%	2.6341	1.3566
The firm undertakes a number of project in order to diversify risk	1.6%	4.1%	22.8%	32.5%	39.0%	4.0325	.9661

**Performance of horticultural firms**

Table 2 presents the responses from performance of horticultural firms that were analyzed using descriptive statistical analysis. The results that sixty seven percent of the respondents felt that horticultural firm's revenue has been in the increasing trend over time. Seventy four percent felt that horticultural firm's cash flow is consistent and healthy. On the other hand, fifty six percent felt that horticultural firms have been making profit consistently

while seventy one percent felt that horticultural firm's quality of products meets customer expectations. Contrary forty nine percent indicated that horticultural firms have not been conducting regular customer satisfaction surveys. Seventy percent indicated that horticultural responds to customers complains in timely manner but fifty one percent indicated that horticultural firm has no standardized operating procedures. Fifty five percent indicated that horticultural firm ensure policies and procedures issued

from time to time are adhered to while seventy six percent indicated that horticultural firm has been focusing on continuous improvements in operational processes. Seventy six percent indicated that horticultural firm encourages employees' innovation in work methods while fifty-five

indicated that horticultural firm's does not organizes for training for the employees in their areas of specialization. A high percentage eighty one percent indicated that there is high responsiveness by employees in service delivery.

**Table 2:** Descriptive Statistics for Performance of Horticultural Firms

Performance statements	SD	A	N	A	SA	Mean	Std Dev
Our horticultural firm's revenue has been in the increasing trend over time.	0.0%	19.5%	13.0%	52.8%	14.6%	3.6260	.9615
Our horticultural firm's cash flow is consistent and healthy.	0.0%	12.2%	13.8%	23.6%	50.4%	4.1220	1.0604
Our horticultural firm has been making profit consistently.	0.0%	35.0%	8.9%	22.8%	33.3%	3.5447	1.2756
Our horticultural firm's quality of products meets customer expectations.	0.8%	4.9%	22.8%	53.7%	17.9%	3.8293	.8068
Our horticultural firm's conducts regular customer satisfaction surveys.	16.3%	33.3%	16.3%	34.1%	0.0%	2.6829	1.1112
Our horticultural responds to customers complain in timely manner.	0.0%	0.0%	29.3%	28.5%	42.3%	4.1301	.8392
Our horticultural firm has standardized operating procedures.	0.0%	51.2%	10.6%	36.6%	1.6%	2.8862	.96838
Our horticultural firm ensure policies and procedures issued from time to time are adhered to.	0.0%	6.5%	38.2%	52.0%	3.3%	3.5203	.66959
Our horticultural firm has been focusing on continuous improvements in operational processes.	0.0%	8.9%	14.6%	52.8%	23.6%	3.9106	.85898
Our horticultural firm encourages employee's innovation in work methods.	0.0%	4.1%	19.5%	72.4%	4.1%	3.7642	.58787
Our horticultural firm organizes for training for the employees in their areas of specialization.	4.1%	51.2%	4.1%	34.1%	6.5%	2.8780	1.12778
There is high responsiveness by employees in service delivery.	0.0%	8.9%	9.8%	67.5%	13.8%	3.8618	.76099

**Inferential analysis for financial risk management practices and performance**

To analyze the financial risk management practices and performance of horticultural firms, the following hypothesis was formulated

There is no statistically significant relationship between financial risk management and performance of horticultural firm in Kenya.

**a. Bivariate linear regression of financial risk management practices and performance**

Table 3 presents the model summary for effect of financial risk management practices on performance of horticultural firms. The result indicates that there is a moderate correlation  $R=0.375$  between financial risk management practices and performance of horticultural firms.  $R^2=0.140$  implied that financing practices explains 14.0% of the changes in performance of horticultural firms while the remaining percentage can be explained by other variables.

**Table 3:** Model fitness for financial risk management practices and performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.375 <sup>a</sup>	.140	.133	.43347

**a. Predictors:** (Constant), Financial Risk Management Practices

The ANOVA for financial risk management practices and performance results as presented in Table 4 shows F statistic of 19.764 at P value of 0.000. The indication that this linear model is fit for performance of horticultural firms

**Table 4:** Analysis of variances for financial risk management practices and performance

Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	3.714	1	3.714	19.764	.000 <sup>b</sup>
	Residual	22.736	121	.188		
	Total	26.449	122			

**a. Dependent Variable:** Performance

**b. Predictors:** (Constant), Financial Risk Management Practices

The results of bivariate regression model equation as presented in Table 5 indicated that a one unit increase in financial risk management practices is associated with a 0.376 unit increase in the performance of horticultural firms. Therefore, the relationship between financial risk management practices and the performance of horticultural firms is as follows:  $Y = 2.238 + 0.376X_3$ .

The results of the research suggest that the implementation of financial risk management practices had a considerable and beneficial impact on the performance of horticulture enterprises. The coefficient  $\beta_3$  was found to be 0.376, indicating a strong relationship, and the associated p-value was 0.000, indicating statistical significance. The null hypothesis posits that there is no statistically significant correlation between financial risk management and the performance of horticultural firms when examined individually.

The finding of the study concurs with Hopkin (2018) [2], who opined that the ability to manage financial risk can lead to improved performance by reducing the need for large-scale reactionary financial measures or cost management which can prove damaging to a business's bottom line. According to Falkner & Hiebl (2015) [1], financial risk management focuses on mitigating losses caused by financial volatility and adverse market conditions. It can also involve identifying, measuring, monitoring and controlling sources of risks within the organization. Sadgrove (2016) [10], noted that by assessing, monitoring and managing financial risk, businesses are better able to protect their financial resources and maintain a healthy working capital.

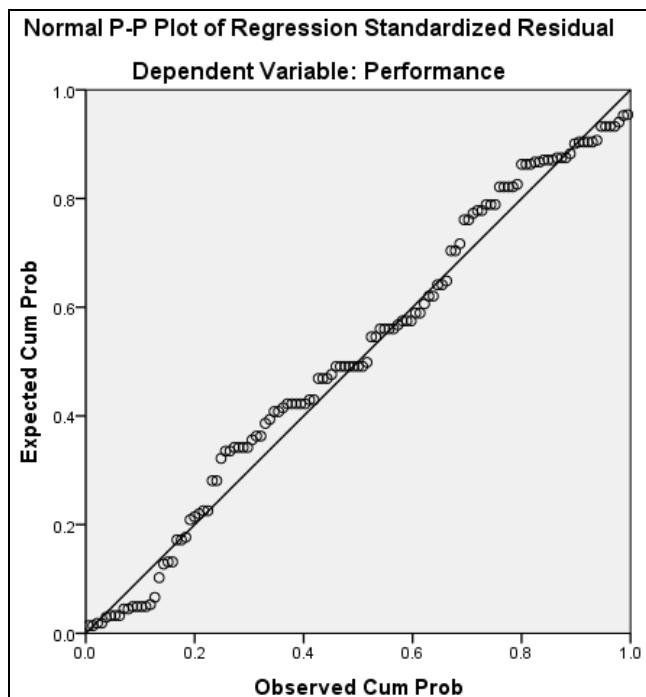
**Table 5:** Regression coefficients for financial risk management practices and performance

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.238	.301		7.446	.000
	Financial Risk Management Practices	.376	.085	.375	4.446	.000

**a. Dependent Variable:** Performance

### Assessment of homoscedasticity for financial risk management

Figure 2 present the P-P test for normality results between Financial Risk Management Practices and performance. The result shows that the chosen bivariate model has a normal distribution.



**Fig 2:** Normal P-P Plot for Standardized Residual for Financial Risk Management Practices

### Conclusion

Descriptive and bivariate regression analyses were undertaken to examine the association between financial risk management practices and the performance of horticultural enterprises. The present research posited a hypothesis suggesting the absence of a statistically significant correlation between the implementation of financial risk management practices and the performance outcomes of horticultural firms. The results of the linear regression analysis indicate a statistically significant and positive association between the implementation of financial risk management practices and the performance of horticultural enterprises when considered independently.

The null hypothesis asserting that financial risk management practices have no impact on the performance of horticultural enterprises was refuted, as shown by a coefficient ( $\beta$ ) of 0.376 at a p-value of 0.000, which falls below the significance threshold of 0.05. Nevertheless, while doing a comprehensive analysis of these financial risk management practices in combination with other characteristics examined in this research via the use of multiple regression, it was found that a positive link persisted. However, it should be noted that this relationship did not reach statistical significance. The coefficient ( $\beta$ ) exhibited a value of 0.143, accompanied with a p-value of 0.068. This implies that when considered in conjunction with these additional factors, the correlation between financial risk management practices and performance is attenuated, suggesting a reciprocal influence among these variables, thereby reducing the effect of financial risk management practices on the performance of horticultural firms.

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