The Effect of Environmental Dynamism on Firms' Liquidity Position of Food Processing Industries in Nigeria

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Abstract:- **This study examined the effect of environmental dynamism on liquidity position of food processing firms in Nigeria. The study specifically analysed the effect of environmental dynamism on current ratio, quick ratio and cash Ratio of the selected food processing firms. Secondary data between 2016 and 2020 sourced from annual financial reports of the selected firms as published on the Nigeria Stock Exchange database. This study utilised Pearson correlation analysis and OLS linear regression analysis to analyse the data collected in order to test all hypotheses. The findings revealed that environmental dynamism (ED) positively affects all dependent variables; There is a positive correlation between ED and current ratio (r = .837), ED and quick (r =.955) and ED and and cash ratio (r=.873). The results of the OLS regression analysis revealed that ED exert an insignificant positive effect on current ratio with coefficient of estimate of 13.4384 (P=0.076 >.05). ED exert a positive significant effect on quick ratio with coefficient of estimate of 12.6512 (P=0.0114<.05) while ED exert a positive but statistically insignificant effect on cash ratio with a coefficient of estimate of 6.8415 (P=0.053 >.05). This study concluded that environmental dynamism positivelyaffects liquidity position of food processing firms in Nigeria. Also, significance of the effect of environmental dynamism reflected differently in the three liquidity ratios examined. Thus, the selected food processing firms in Nigeria should complete their cash-to-cash cycle in the shortest possible time in order to be positively prepared for uncertainty.**

I. INTRODUCTION

Abrupt changes in the business environment can have both positive and negative consequences for businesses, depending on their responsive strategy, flexibility, and competitive edge. In this condition, firms require a strategic management approach that relies on operational ideologies and non-traditional techniques to deal with environmental dynamism, with the goal of achieving superior performance by paying more attention to external environment variables to provide added value to customers, as well as a high level of uniqueness.

According to Zhang et al. (2010) Strategy change improves environmental dynamics, financial flexibility, and enterprise strategic change to align with the environment. Because of the rapid advancement of information technology, the aggressivecompeting environment in which manufacturing firms operate changes quickly and not easily predictable. "Enterprises can only become more competitive in the fierce competition by keeping up with environmental changes and timely adjusting strategies". Fu Haotian *et al.* (2018).

Nigeria's food processing sector is always innovating (to enhance manufacturing processes), aggressively marketing (to outperform competitors), and responding to client demand by developing new products or upgrading old ones. When this is paired with an unstable, fluctuating economy like Nigeria's, the result is an industry setting marked by volatility, uncertainty, and instability (constantly changing).

Aggressive market competition, rapid development of information technology leading to changes in production processes, changing customer demands due to changes in taste or income, rapid economic change, and other factors combine to make the business environment highly dynamic, constantly unstable, and increasingly unpredictable. Financial managers must manage liquidity in a series of continuing policies and processes to guarantee that the enterprise can access funds as needed to pay for goods and services, pay employees, and invest in new opportunities,for the organization to survive in a dynamic economy. Uncertainty is not an issue in and of itself for an organization; what matters is the company's capacity to cope with it and take steps to mitigate its impact. (Mensing. L, 2013). Market competition, technological innovation, changes in customer preference or taste, and economic conditions such as changes in foreign exchange, all of which are components of environmental dynamism, can create opportunities and threats for businesses, particularly in the food processing industry, which is constantly investing in multiproduct with aggressive marketing strategies for growth.

Nigeria's food processing sector was worth $10 billion in 2013 and is anticipated to increase by several tens of billions by 2050. (USDA 2013). It also employs an estimated ten million people directly. According to the FAO

(2020) study, the food processing sub-sector employs at least half of the country's manufacturing workforce.

The Nigerian food processing industry plays a critical part in the country's economic development. Demand for pastas, noodles, biscuits, confectionary, flour mill by products and dairy products keep rising and fluctuate as a result of a wealthy middle income with more expendable cash, population expansion in an already large population, and rapid population growth, particularly among babies, children, and young people, driving the categories of infant formula, pastas, biscuits, confectioneries, and dairies. Aggressive marketing and technical innovation by corporations aimed at enhancing product value have continually heightened market activity. These marketing operations, along with a volatile economy in which exchange rates continue to decrease pricing and production costs, produce a dynamic business environment with the accompanying implications of unpredictability, uncertainty, and volatility. Because there are more components involved in creating numerous goods, Nigerian food processing enterprises are subjected to a larger amount of environmental unpredictability and dynamism.

Dynamism is a term that refers to the environment's volatility or unpredictability, and it is positively related with uncertainty. (BoydK. and GoveS., 2006). Environmental dynamism, in general, refers to the pace of change and the degree of factors instability in a given environment. (Li and Simerly, 1998). Dynamism can be described with reference to; technological change, which leads to changes in production processes; customer preference changes, which leads to changes in products; market competition, which leads to changes in marketing activities; and changes in foreign exchange or economic policy, which leads to changes in investment plans. All of these summed up to instability or unpredictability of the environment.

Businesses do not operate in isolation; they function in a constantly changing environment that has a significant influence on how they function and whether or not they will achieve their objectives. Numerous external organizations and influences make up this external business environment. Each of these industries presents organizations with its own set of difficulties and opportunities. Owners of firms and managers must continually investigate the environment and reposition their firms to have competitive edge.

Enterprise owners and management have complete control over a company's internal environment, including day-to-day decisions. They choose the commodities they purchase, the employees they hire, the products they offer, and the stores where they offer them. They put their expertise and resources to work to create items and services that will appeal to present and prospective customers. External environmental conditions, on the other hand, are frequently beyond the control of management and change on a regularly. The frequent lack of control does not imply that management should ignore the environment; rather, it requires constant monitoring of the environment in order to respond to negative responses or external changes.

Enterprises can only grow more successful in the harsh competition if they keep up with the changes in the environment and alter their plans in a timely manner.

Because of the nature of the business environment, management is frequently forced to make decisions in conditions of great uncertainty. This unpredictability, when paired with insecure economic and political policies or actions, can render a company's working capital unpredictable, affecting its liquidity and profitability. One of the most essential aims of working capital management is liquidity, which is also a core responsibility of revenue optimization and financial success. Efficient working capital management improves a company's operating success while also assisting in meeting short-term liquidity needs. (Maness and Zietlow, 2005; Samiloglu and Demirgunes, 2008).

Liquidity refers to a company's capacity to fulfil its short-term obligations. It refers to the capacity a company to transform its assets into cash. Short-term obligations are those that expire within one accounting year. The operational cycle is reflected in the short term as well: procuring, producing, selling, and collecting. An unwell or bankrupt company is one that is unable to pay its debts on time and continues to infringe its credit, service, and product responsibilities. A company's operations and, in many cases, its reputation may suffer if it is unable to meet short-term obligations. A firm may be unable to enjoy the benefits of incentives provided by credit, service, and materials suppliers due to a lack of cash or liquid assets on hand. The loss of such incentives might lead to higher products costs, reducing the firm's profitability. As a result, the corporation must constantly maintain a particular level of liquidity. Liquidity, on the other hand, has no set criterion. The type of the business, the scope of operation, the location of the firm, and a variety of other factors all have a role.

The liquidity status of a corporation is important to all stakeholders. A goods supplier will analyze the company's liquidity before supplying goods on credit. Employees are also interested in the business's liquidity because they want to know if the company can meet its employees' responsibilities such as salaries, pensions, and provident funds.Because liquidity has such a large influence on profitability, shareholders are interested in learning more about it. Since profitability and liquidity are inversely connected, high liquidity may be unappealing to shareholders. On the other hand, shareholders understand that a lack of liquidity will prevent the firm from receiving incentives from suppliers, creditors, and bankers.

Efficient and suitable management of a firm's liquidity needs is critical to ensuring the company's overall capacity to satisfy short-term obligations using assets that can be turned into cash quickly. In today's globalized, intensely competitive, and dynamic corporate world, as well as in times of financial and economic difficulty marked by diminishing cash inflows and declining market situation, the company's liquidity position is critical.

All businesses assess their liquidity in order to forecast future needs and strike a balance between having too much and not enough. Maintaining this equilibrium in times of economic turmoil should thus become more common. Liquidity planning is an essential component of cash management since it might affect the demand for short-term funding. When businesses run out of cash, they may postpone payments to creditors, which is bad for business and can lead to a variety of consequences, including worse credit conditions in the future.

The aim of this study therefore is to find out the effect of environmental dynamism on liquidity position of food processing firms in Nigeria.Firm Liquidity position is the response (dependent) variable and will be measured using the three basic traditional ratios supported by extant literatures (Current Ratio, Quick Ratio and Cash Ratio), while environmental dynamism is the predictor (independent) variable. Environmental Dynamism construct will be measured by finding uncertainty in the food processing industry at firm level using firms' sales as extensively researched and rigorously tested by Boyd and Gove (2006). It is the most commonly used (Bergh 1988, Bermain, Wick, kitt and Jones 1999, Lepark, Takenchi and Snell, 2003, Harris, 2004, Pagev and Krause 2004). The process of standardizing firm revenue to obtain firm level environmental dynamism is described and detailed in Project Methodology.

As financial managers of food processing companies in Nigeria constantly rejig and adapt their strategies within the firm to improve liquidity and cash flows, the pertinent question is to ask is, what is the liquidity positions of each of these firms in the face of fierce market competition and constant creation of new products in response to continuous changing customer demand that characterized this sub sector? Are liquidity positions of these firms constantly being impacted by uncertain and dynamic business environment of the food processing industry? In relation to the above statement of problem, most researchers (Partick L, Michael I, Okereke C, Momoh I, 2016, Chinedu F and Chinedu O, 2018), focused on economic dimensions and dynamism of business growth without looking at the growth and sustainability of the food processing firms. In line with this, the questions highlighted above are identified as gap the research intends to cover.

A. Objectives of the Study
The competitive environment of the food processing industries in Nigeria is so tense that any firm in this sub sector that aims to survive must be fully aware of the dynamism of the business environment and the consequences of its liquidity. This study seeks to investigate the effect of the components of environmental dynamism on liquidity position of food processing companies in Nigeria, while some of the specific objectives of the study are:

- To investigate the effect of environmental dynamism construct on Current Ratio of food processing industry in Nigeria
- To evaluate extent to which environmental dynamism significantly affects Quick Ratio of food processing industry in Nigeria.
- To analyse the influence of environmental dynamism on the cash ratio of food processing industry in Nigeria.

B. Research Hypotheses
The following hypotheses, are formulated for this study:
H1: There is no significant effect of environmental dynamism on Current Ratio of Food processing firms in Nigeria.
H2: There is no significant effect of environmental dynamism and Quick ratio of food processing firms in Nigeria.
H3: There is significant influence of environmental dynamism on Cash Ratio of food processing firms in Nigeria.

C. Definition of Terms
- **Environmental Dynamism:**It is the rate of change in an environment. It is also referred to as the degree of turbulence or instability of important operational issues including market and industrial circumstances, as well as more general technical, economic, social, and political influences.
- **Market Turbulence**: The erratic pace of change in the makeup of consumers and their preferences.
- **Food Processing:**Food processing is the process of converting agricultural products into food or converting one type of food into another.
- **Food Processing Industry:**Production of food, marketing, manufacturing, transformation, preparation, storage, transportation, accreditation, and packaging
- **Liquidity:**The efficiency or convenience with which an asset or security may be converted into immediate cash without influencing its market price
- **Liquidity Management:**Liquidity management deals with the planning and control required to guarantee that a company maintains sufficient liquid assets, either as a commitment to its customers or to pay responsibilities arising from the business's survival.
- **Liquidity Ratio:** Liquidity ratios use indicators to calculate a company's capacity to meet debt commitments and its margin of safety.
- **Current Ratio:** The capacity of a corporation to pay off its current obligations (debts due within one year) with its entire current assets (cash, accounts receivable, and inventory)
- **The Quick Ratio:**The quick ratio, which removes inventory from current assets, assesses a company's ability to satisfy short-term obligations with its most liquid assets. The "acid-test ratio" is another name for it.
- **Cash Ratio:** The ratio of a company's cash and cash equivalent assets to its total liabilities is known as the cash asset ratio. The cash ratio is a development of the quick ratio that shows how quickly readily accessible funds may be used to pay down current liabilities.
- **Assets:** A resource having economic worth that an individual, business, or country possesses or controls with the hope of future gain is referred to as an asset.
- **Liability:** A liability is a debt that a person or corporation owes to another party, generally in the

form of money. Liabilities are resolved over time by exchanging economic advantages such as money, products, or services.

D. Conceptual Framework

This research provided a conceptual model consisting of two variables whose interrelationships are depicted in figure 1 in order to respond to the knowledge gaps revealed in the presentation of the problem of this study.

The dependent or response variable of the study is firm liquidity position while the independent explanatory variable is environmental dynamism. The three most used ratios; current ratio, quick ration and cash ratio will be used to proxy firm liquidity position while environmental dynamism will be operationalized by finding firm level uncertainty in the processing industry through standardized revenue mean values.
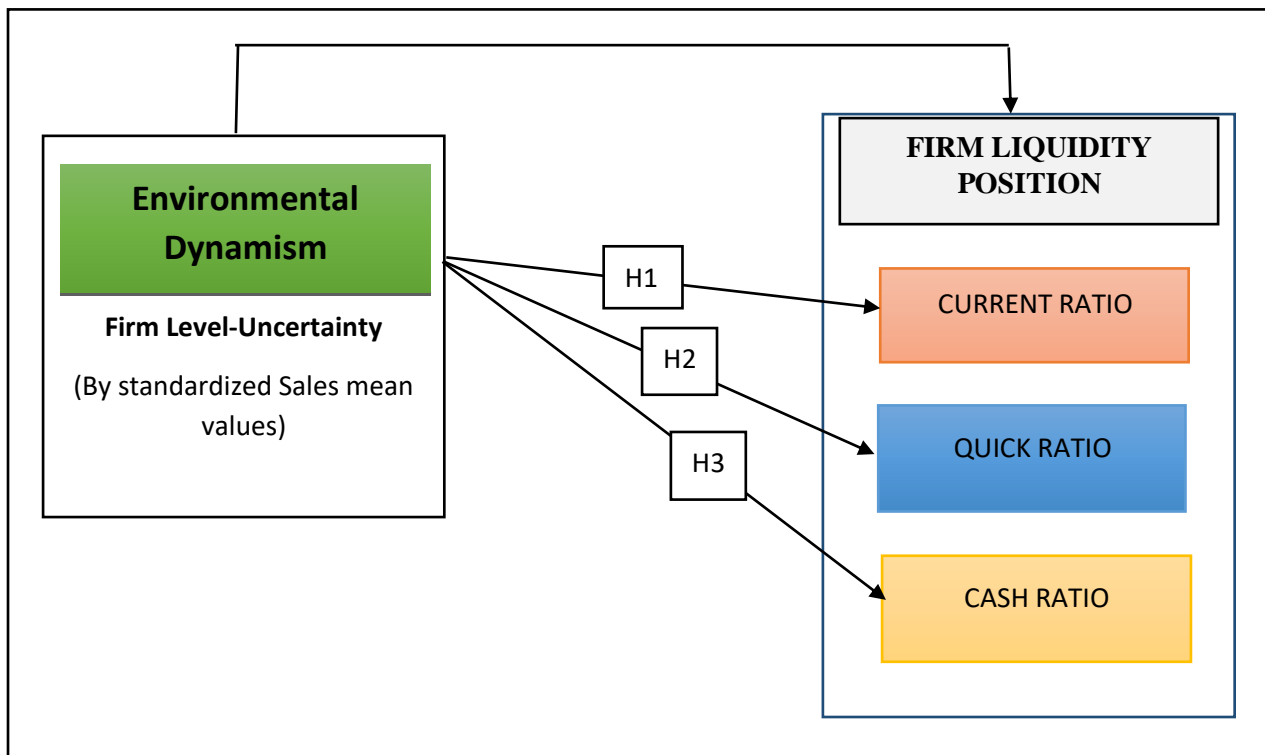

Fig. 1: Researcher's Conceptual Model

II. METHODOLOGY

This research relied solely on secondary data. Secondary data was sourced from firms audited financial statements published either on their websites or on the Nigeria Stock Exchange data base. The population for this study is made up of Nigerian food processing companies that are publicly traded on the Nigerian stock exchange. The food processing business was chosen for the study because of its relevance in the economy's health care sector.

Food processing firms listed on the Nigeria Stock Exchange under consumer goods sector as at August 2021 are:
- Champion Brew Plc
- Dangote Sugar Refinery Plc
- Flour Mill Nig. Plc
- Golden Guiness Brew Plc
- Guiness Nig Plc
- Honeywell Flour Mill Plc
- International Breweries Plc.
- Milti-Trex Integrated foods Plc.
- N.Nigeria Flour Mill Plc.
- NASCON Nigeria Plc.
- Nestle Nigeria Plc.

- Nigerian Brew Plc.
- MCNICHOLS Plc.
- Cadbury Nigeria Plc.

In respect of this research, this study adopted purposive sampling techniques to select the sample based on the following criteria:
- Firms must be listed on the Nigerian Stock Exchange (NSE).
- Firms must have audited financial statements for the period under review (206-2020)
- Firms must be operational within the period under investigation.
- Firms must have multiproduct. This assures regular innovations, constantly changing production line and good measure of customers' preferences.
- Firms must have almost the same product range to be each other's competitor.
- Firms must have enough items detailed on their published financial statement for easy computation of financial ratios needed for this study.

Based on these selection criteria, three (3), food processing firms were selected as sample size, representative of Food processing Firms in Nigeria.

Data were collected from secondary source, precisely the annual financial statement of the selected firms as published and made public on the Nigeria Stock Exchange website.Data were drawn from audited comprehensive income statement and statement of financial positions (Balance Sheet) of the firms under review.

A. Measuring the Variables.
- **Liquidity ratios**: to obtain data for liquidity ratios (Current Ratio, Quick Ratio and Cash Ratio), the following items were taking into consideration from the statement of financial positions (Balance Sheet) of sampled firms;

CURRENT ASSET (Inventory, Trade and other Receivable, Prepayments, other Assets, Cash and cash equivalent).

CURRENT LIABILITY (Borrowings, Trade and other payables, Current Tax, Dividend Payable, other current liabilities)

Ratios to be used are thus calculated and data obtained:

CURRENT RATIO = Current Assets ÷ Current Liabilities.

QUICK RATIO = (Current Assets – Inventories) ÷ Current Liabilities.

CASH RATIO = (Cash and Cash Equivalents + marketable securities)÷Current Liabilities.

These ratios formed the **dependent variables** for this study. Each ratio was individually regressed on environmental dynamism scores.
- Revenue was obtained from published income statement of the 3 firms selected.
- Total revenues of the 3 firms selected for our study for 5 years (206-2020) were regressed on the year variable. Revenue as dependent variable and year as independent variable.
- The standard error of the regression slope coefficient obtained in 1 above was divided by the mean of the 3 firms' annual revenue for each year to create environmental dynamism scores.

Model specification: **Revenue = α + β Year + ε**

See table 3 for ED score.

To analyse data obtained for this study, Pearson correlation and OLS Regression Analysis were used. The proxy for Environmental Dynamism which is the explanatory (Independent) variable are the scores obtained by standardizing the mean of firms revenues in the Simple regression above and the proxy for the response variable, Liquidity Position(dependent variable) of this study are (1) Current Ratio. (2). Quick Ratio. (3).Cash ratio.

Model Specification for this research is presented below:
LDT= f (Ed)
Model 1: CR= β_0+ β_1ED+ *et*. for Current Ratio…..to test hypothesis (1)
Model 2: QR= β_0 + β_1ED+ *et*. for Quick ratio……to test Hypothesis (2)
Model 3: CSR = β_0 + β_1ED + *et*. for Cash ratio…To test Hypothesis (3)

Where:
ED = Environmental Dynamism
LDT=Liquidity.
CR = current ratio
QR = Quick Ratio
CSR = Cash Ratio
β_0 = Intercepts
β_1 = Coefficients
et = represent the error term.

III. DATA PRESENTATION AND ANALYSIS

Three food processing firms were selected for this study, their annual financial reports were obtained from the NSE database. Quick Ratio (QR), Current Ratio (CR) and Cash Ratio (CSR) were computed for a 5-year window (2016-2020) and presented in Table 1. Total revenues and mean of revenues of the firms were also computed per year, for a 5-year window and presented in Table 2.

Quick Ratios (QR)				
YEAR	**FLOUR MILL**	**HONEYWELL**	**NN FLOUR MILL**	**MEAN**
2015	0.81	0.19	2.1	1.033
2016	0.88	0.38	1.83	1.03
2017	0.75	0.32	0.27	0.446667
2018	0.59	0.48	0.35	0.473333
2019	0.54	0.39	0.89	0.606667
2020	0.63	0.36	0.26	0.416667

Current Ratios (CR)

YEAR	FLOUR MILL	HONEYWELL	NN FLOUR MILL	MEAN
2015	1.22	0.58	2.8	1.533333
2016	1.2	0.5	2.88	1.526667
2017	1.04	0.49	0.68	0.736667
2018	1.1	0.77	1.25	1.04
2019	1.03	0.73	1.65	1.136667
2020	1.24	0.69	0.58	0.836667

Cash Ratio(CSR)

YEAR	FLOUR MILL	HONEYWELL	NN FLOUR MILL	MEAN
2015	0.16	0.12	1.57	0.616667
2016	0.18	0.35	1.04	0.523333
2017	0.13	0.29	0.14	0.186667
2018	0.12	0.27	0.19	0.193333
2019	0.07	0.25	0.15	0.156667
2020	0.16	0.23	0.48	0.29

Table 1: Quick Ratio, Current Ratio and Cash Ratio of the Selected Food Processing Firms

Source: Computed from firms' Annual Financial Report available on NSE database.

YEAR	FLOURMILL REVENUE ('000)	HONEYWELL REVENUE ('000)	N.N FLOURMILL REVENUE ('000)	TOTAL REVENUE ('000)	MEAN ('000)
2016	50,883,780	249,876,504	979,038	301,739,322	100,579,774
2017	53,227,891	375,225,284	940,521	429,393,696	143,131,232
2018	71,476,319	371,370,740	2,861,752	445,708,811	148,569,604
2019	74,409,113	370,205,529	4,149,917	448,764,559	149,588,186
2020	80,450,397	394,884,217	8,841,135	484,175,749	161,391,916

Table 2: 5-Year Annual Revenue for Selected Food Processing Firms

Source: Computed from firms' financial statements available on NSE database

Before we investigate the effect of environmental dynamism (ED) on the liquidity ratios of the selected processing firms, there is need to statistically obtain ED scores as the explanatory (Independent) variable of this study.

Based on the simple regression model below, using the data in table 2 above, a simple regression analysis was performed to obtain the standard error of the regression slope coefficient.

Revenue = α + β Year + ε
Dependent variable = Total Revenue
Independent variable = Year (Time)
Standard Error of the regression slope coefficient = **12,776,590.07**
Significance level = 0.05.

The standard error of the regression slope coefficient was divided by the mean of revenue for each year to obtain ED (Environmental Dynamism) Scores in Table 3.

YEAR	ED
2016	0.127029417
2017	0.089264865
2018	0.085997336
2019	0.085411759
2020	0.079164994

Table 3: Environmental Dynamism Scores

Source: computation by researcher

We may get a preliminary understanding of the link between Environmental Dynamism, Current Ratio, Quick Ratio and Cash Ratio of the processing firms under review by looking at the correlation of these variables in the model.

The Pearson correlation coefficient technique was utilized to complete the correlation analysis of each variable and the result is shown in table 4.

Correlations		Environmental Dynamism	Current Ratio	Quick Ratio	Cash Ratio
Environmental Dynamism	Pearson Correlation	1	.837	.955[*]	.873
	N	5	5	5	5
Current Ratio	Pearson Correlation	.837	1	.941[*]	.723
	N	5	5	5	5
Quick Ratio	Pearson Correlation	.955[*]	.941[*]	1	.832
	N	5	5	5	5
Cash Ratio	Pearson Correlation	.873	.723	.832	1
	N	5	5	5	5
*. Correlation is significant at the 0.05 level (2-tailed).					

Table 4: Pearson Correlation Analysis Report

Source: Researcher analysis

The correlation analysis results between Environmental dynamism, Current ratio, Quick ratio and the Cash ratio. The report revealed a strong positive correlation, between the explanatory variable (ED) and each of the dependent variables (CR, QR and CSR). ED is positively correlated to CR, QR and CSR. The Pearson correlation values are also close to 1 and this simply means a change in environmental dynamism (ED) causes changes in Current ratio, Quick ratio and Cash ratio for the food processing firms. Since CR, QR and CSR are the dependent variables in our regression models and ED is the only independent variable, the associations recorded between the dependent variables in the correlation result above are irrelevant and multicollinearity is therefore not an issue.

The correlation analysis will not serve as a foundation for generalization on the real link between company liquidity ratios and environmental dynamism, because the correlation analysis only determines the presence of association or relationship between variables. However, Regression will reveal the extent of the relationship and how much of the liquidity ratios are dependent on environmental dynamism. As a result, the regression models 1, 2 and 3 of this study will be used to measure the effect of the explanatory variable on the dependent variable.

Regression Model 1 was analyzed in order to test the first hypothesis and the result is presented in Table 5.

	ED	CR
2016	0.127029417	1.526666667
2017	0.089264865	0.736666667
2018	0.085997336	1.04
2019	0.085411759	1.136666667
2020	0.079164994	0.836666667
R Square = 0.7012.	**Coefficient of ED = 13.4384.**	**P-Value = 0.076**

Table 5: Regression Analysis of Current Ratio On Environmental Dynamism

Source: Researcher's analysis

Table 5 revealed the ability of environmental dynamism to predict Current ratio. Within the sample test and goodness of fit, the R square, also known as the coefficient of determination, indicates the effectiveness of the regression in estimating the value of the dependent variable (CR). R^2 showed that 70.12% of the variance in Current Ratio is explained by Environmental Dynamism scores. The Beta coefficient is positive with a value of 13.4384, meaning that a unit increase in Environmental dynamism causes a 13.4384 units increase in Current Ratio provided that all other variables are kept constant at 95% confidence interval. P-value of .076 indicates that Environmental Dynamism is not statistically significant on Current Ratio of the food processing firms.

Since P-value (.076) > .05, we <u>accept</u> the Null hypothesis 1. "There is no significant effect of

environmental dynamism on current ratio of the selected food processing firms in Nigeria".

	ED	QR
2016	0.127029417	1.03
2017	0.089264865	0.446666667
2018	0.085997336	0.473333333
2019	0.085411759	0.606666667
2020	0.079164994	0.416666667
R Square = 0.9115.	**Coefficient of ED = 12.6512**	**P-Value = 0.0114**

Table 6: Regression Analysis of Quick Ratio on Environmental Dynamism

Source: Researcher's Analysis

The coefficient of determination, R^2 value of 0.9115 in the above analysis mean 91.15% variations in the Quick Ratio (QR) can be explain by environmental dynamism (ED). Beta coefficient is positive with a value of 12.6512, meaning a unit increase in environmental dynamism leads to a 12.6512 increase in the Quick Ratio of the selected food processing firms. **P-value is .0114** indicating that environmental dynamism (ED) has significant effect on the Quick ratio (QR) statistically for food processing firms.

Regression model 2 was analyzed to test the hypothesis 2 and the result is presented in Table 6.

Since P-value (.0114) < .05, we reject the Null hypothesis 2. "There is no significant effect of environmental dynamism on Quick Ratio of the selected food processing firms in Nigeria".

Regression model 3 was analyzed to test the hypothesis 3 and the result is presented in Table 7.

	ED	CSR
2016	0.127029417	0.523333333
2017	0.089264865	0.186666667
2018	0.085997336	0.193333333
2019	0.085411759	0.156666667
2020	0.079164994	0.29
R Square = 0.7620	**Coefficient of ED = 6.8415**	**P-Value = 0.053**

Table 7: Regression Analysis of Cash Ration (CSR) on Environmental Dynamism

Source: Researcher's Analysis

The coefficient of determination, R^2 value of 0.7620 in the above analysis mean 72.20% variations in the Cash Ratio (CSR) can be explain by environmental dynamism (ED). Beta coefficient is positive with a value of 6.8415, meaning a unit increase in environmental dynamism leads to a 6.8415 increase in the Quick Ratio of the selected food processing firms. **P-value is .053** indicating that environmental dynamism (ED) has no significant effect on the Cash Ratio (QR) statistically for the selected food processing firms.

Since P-value (.053) > .05, we accept the Null hypothesis 3. "There is no significant effect of environmental dynamism on Cash Ratio of the selected food processing firms in Nigeria".

IV. DISCUSSION OF FINDINGS

This study is an ex post facto analysis to study event that already occurred in the past. All data were obtained from the financial statement of the three firms as published on the Nigeria Stock Exchange database.

Firstly, this study demonstrates through correlation analysis that, there exist a positive relationship between environmental dynamism and Liquidity position (Current ratio, quick ratio and current ratio) of the selected food

processing firms. Meaning, as uncertainty increases, firm liquidity tend to increase, since all the liquidity ratios used in this study were affected positively. This is in agreement with the findings of Christopher et al (2009) that liquidity increases as firm faces increased uncertainty and tend to fall as uncertainty reduces. The Theory of Liquidity Preference (Keynes 1936), adopted for this study, explained this phenomenon. Firms maintain liquidity for transactional, precautionary and speculative motives. According Keynes, for the precautionary motive, firms prefer liquidity in the event of unpredictability that necessitates extraordinary expenses.

Holding extra inventory to improve liquidity, according to Azadegan et al. (2013), Manikas et al (2021), is an efficient way to maintain output in a changing environment. Furthermore, they stated that having surplus inventory helps businesses to be ready to take greater risks and gain a competitive edge, hence enhancing their chances of survival.

Secondly, the findings of this study demonstrate through the result of the regression analysis that each of the ratios behaved differently when regressed on environmental dynamism. Current ratio and cash ratio were statistically not

significant, while quick ratio was statistically significant with highest R square value.

The current ratio is a calculation that analyzes a company's current assets and liabilities.The current ratio included inventory in its calculation and presupposes that the company's inventory will be liquidated at the same price as it appears on the balance sheet. This, however, may not be the case. Many times, stocks become outdated and must be dumped or sold for a fraction of their original purchase price. Investors are not warned about this riskby the current ratio. In real situation, if inventory cannot be sold due to change in customer preference (a component of environmental dynamism –uncertainty), the effect produced on firm liquidity will not be properly reflected by the current ratio, since price of those inventory has been included as current asset of the firm.

The effect of environmental dynamism is highly significant on quick ratio. The quick ratio assesses a company's ability to meet its commitments in the event that it is unable to dispose its inventory. In this case, the firm will have to pay its current liabilities with cash and cash equivalents on hand, as well as the funds it has previously committed to accounts receivables. Food processing industry in Nigeria is characterized by multiproduct and moving large quantity of inventories. In a bid to increase market share or fulfil revenue target, products are given to distributors or wholesalers in anticipation of sales. In real life situation where these stocks get obsolete or lose sales value due to market uncertainty (change in customer preference for example) firms are forced to use cash and cash equivalents, plus account receivables to offset current liability. This effect is highly reflected in the quick ratio of the firm.

The cash ratio is the least often utilized of the liquidity ratios, and it is only employed when the firm in question is in desperate trouble. Only in absolute dire circumstances does a corporation find itself unable to satisfy its short-term commitment. The precautionary motivation, according Keynes theory of liquidity says that a business would stockpile cash to meet unplanned situations, whereas the speculative drive claims that a corporation will accumulate cash to take advantage of potential profit possibilities. Firm holds a significant amount of their assets in anticipation of uncertainty or source for fund in long-term borrowing as buffer against uncertainty.

V. SUMMARY, CONCLUSION AND RECOMMENDATION

A. Summary

Previous research has shown that environmental dynamism has a moderating influence on a variety of performance measures, with the majority of them assessing industry level uncertainty. This study however, through its main objective, demonstrated the directed effect of environmental dynamism on liquidity ratio of food processing firms in Nigeria in order to measure its effect on their liquidity position at firm level.

All the three objectives of this were analysed and the results were unique. This study selected three food processing firms listed on the NSE as sample (Flour Mill Plc, Honewell Plc and Northern Nigeria Flour Mill Plc). Their financial statements were obtained from the NSE database and all variables of interest to this study (Current Ratio, Quick Ratio, Cash Ratio and Environmental Dynamism Scores) calculated. Three hypotheses were tested in line with the three objectives of this study.

Correlation analysis revealed the existence of a positive relationship between Environmental Dynamism and the liquidity ratios used in this study. The finding of this study revealed that, for the food processing firms used in this research work, increase in uncertainty causes an increase in liquidity. These firms tend to hold or increase liquidity asset to better respond to any form of uncertainty such as change in customers' preference or competitors' activities.

Regression analysis was performed in order to test the three hypotheses of this study. The first hypothesis was accepted as environmental dynamism did not show a statistically significant effect on Current ratio. P-Value was greater than .05. The second hypothesis was rejected, environmental dynamism showed a significant effect on Quick ratio, P-value was greater than .05. The third hypothesis was accepted, environmental dynamism did not show a significant effect on cash ratio of the selected food processing firms.

B. Conclusion

Based on the findings of this research, there is no question that environmental dynamism as measured by firm-level uncertainty has an influence on liquidity position of food processing firms in the Nigeria. This study concluded that Uncertainty in the food processing industry in Nigeria has positive effect on the current ration, quick ratio and current ratio of the selected firms used for this study. This mean that, as uncertainty increases, firm liquidity tend to increase, since all the liquidity ratios used in this study were affected positively. This is in agreement with the findings of Christopher et al (2009) that liquidity increases as firm faces increased uncertainty and tend to fall as uncertainty reduces.

This Study also concluded that although environmental dynamism has positive effect on the three liquidity ratio used in this study, only Quick ratio was significantly affected statistically. Quick ratio exclude inventory from its calculation, however, in the case that these inventories become obsolete or lose its market price due to uncertainty, firm are forced to firms are forced to use cash and cash equivalents, plus account receivables to offset current liability. This effect is highly reflected in the quick ratio of the firm.

C. Recommendations

- The selected food processing firms in Nigeria should complete their cash-to-cash cycle in the shortest possible time in order to be positively prepared for uncertainty.

- Environmental dynamism (uncertainty) showed a significant effect on Quick Ratio, since quick ratio does not take into account Inventory, it is therefore recommended that overall inventory management of food processing firms must be improved through the effective deployment of inventory control systems and the enhancement of their sales management in order to decrease finished products stockpiling and increase highly liquid assets to better prepare firm against uncertainty.

- This study established positive effect of environmental dynamism on liquidity ratios of the selected food processing firms, hence, financial managers of food processing firms in Nigeria must constantly rejig liquidity management strategiesto accommodate financial flexibility to have enough internal financing when making financing decision to avoid constraining business activities in response to uncertainty shock.

REFERENCES

[1.] Azadegan, Arash, et al.(2013). "The effect of environmental complexity and environmental dynamism on lean practices." Journal of Operations Management 31.4: 193-212.

[2.] Ben – Caleb, E.(2009). "Working Capital Management and Profitability of listed Companies in Nigeria",Nigerian Research Journal of Accountacy,vol.1(1) pp.44-57.

[3.] Boyd B K, Dess G G, Rasheed A M (1993). Divergence between archival and perceptual measures of the environment: Causes and consequences. Academy of Management Review, 1993, 18(2): 204.

[4.] Boyd. B.K and Gove Steve (2006). Managerial Constraint: The Intersection Between Organizational Task Environment and Discretion. Research Methodology in Strategy and ManagementDOI: 10.1016/S1479-8387(06)03005-0. Retrieved from;

[5.] https://www.researchgate.net/publication/228979683

[6.] Chinedu Francis Egbunike and Chinedu Uchenna Okerekeoti (2018). Macroeconomic factors, firm characteristics and financial performance A study of selected quoted manufacturing firms in Nigeria. Asian Journal of Accounting Research Vol. 3 No. 2, 2018 pp. 142-168 Emerald Publishing Limited 2443-4175 DOI 10.1108/AJAR-09-2018-0029.

[7.] Christopher, F.B, Liyan H and Boyan, L (2009). The Effects of Uncertainty and Corporate Governance on Firms' Demand for Liquidity. Journal of Applied Economics. Retrieved from: http://fmwww.bc.edu/EC-P/wp726.pdf.

[8.] FAO. 2020. The State of Agricultural Commodity Markets 2020. Agricultural markets and sustainable development: Global value chains, smallholder farmers and digital innovations. Rome, FAO. https://doi.org/10.4060/cb0665en.

[9.] Food Industry in a troubled Economy, Article by Luke Onyekakeyah. The Guardian, 30th Oct 2018. https://guardian.ng/opinion/food-industry-in-a-troubled-economy/.

[10.] Fu, H.t., Yu, B. and Wang, K. (2018) Environmental Uncertainty, Slack Resources and Corporate Strategic Change. Science of Science and Management of S. &.T, 3, 92-105.

[11.] Internet Securities Inc. (2013):" Corporate profile of Cadbury Nigeria Plc". Retrieved from http://www.securities.com/Public/companyprofile/NG/CADBURY_NIGERIA_PLC_en_2037149.html

[12.] Landers Investment & Trade Market Survey (2020). Food and Beverage Industry in Nigeria. Market overview. Pp9-pp13. www.flandersinvestmentandtrade.com.

[13.] Maness, T.S. & Zietlow, J.T. (2005). Short-term financial management. 3rd edition. Ohio: South-Western/Thomson Learning.

[14.] Manikas, A. S., Kroes, J. R., & Foster, B. P. (2021). Does the importance of environmental issues within an industry affect the relationship between lean operations and corporate financial performance? Sustainable Production and Consumption, 27, 2112-2120.

[15.] Mensing. L (2013). Theoretical Foundation of Supply Management: Contributions of the Resource Dependence Theory. Faculty of Management and Governance, University of Twente, The Netherlands. https://essay.utwente.nl/63735/1/Bachelor_Thesis_Lukas_Mensing_RDT.pdf

[16.] Micheal N.B. (2012), Working Capital Management Efficiency And Corporate Profitability, Journal Of Applied Finance And Banking, 2(2), 215-237.

[17.] Pandey, I.M. (2005): Financial Management (8thed.). New Delhi, UBS Publishers' Distributors PVT Limited.

[18.] Partick L, Michael I, Okereke C, Momoh I (2016). Economic Environment and Performance of Food and Beverage Sub-Sector of a Developing Economy: Nigeria. International Journal of Recent Research in Commerce Economics and Management (IJRRCEM) Vol. 3, Issue 3, pp: (85-90).

[19.] Pedro, J.G and Pedro, M. (2007): "Effects of working capital management on SME Profitability", International journal of managerial finance, 3(2), pp. 164-177.

[20.] Pfeffer,J and Salancik, G. R. (1978), The External Control of Organizations: A Resource Dependence Perspective. Stanford University Press, ISBN: 9780804767187.
http://www.sup.org/books/title/?id=5889.

[21.] Pira, Roxana Diane (2010). "Analysis of the relationship between liquidity and profitability", Retrieved from www.dafi.ase.ro/revista/5/Pira%20Roxana.pdf.

[22.] Polit D.F. & Hungler B.P. (1999) Nursing Research: Principles and Methods 4th edn. Lippincott, Philadephia. Profitability, Financial practice and education", 8(2) pp. 37-45.

[23.] RBS (2011): "Working capital management", Retrieved from

http://mib.rbs.com/docs/MIB/Insight/Raising-capital-and-the-search-for-liquidity/Working-CapitalManagement.pdf.

[24.] Rojon, C., & Saunders, M. N. (2012). Formulating a convincing rationale for a research study. Coaching: An International Journal of Theory, Research and Practice, 5(1), 55-61.

[25.] Roman A. and Tomuleasa I. (2012):"Analysis of profitability determinants: Empirical evidence of commercial banks in new EU member states", Retrieved from icfb.rs.opf.slu.cz/sites/icfb.rs.opf.slu.cz/files/39_roman.pdf

[26.] Samiloglu, F., & Demirgunes, K. (2008). The effect of working capital management on firm profitability: Evidence from Turkey. The International Journal of Applied Economics and Finance, 2(1), 44–50.

[27.] Simerly, R.L., & Li, M. (2000). Environmental dynamism, capital structure and performance: A theoretical integration and an empirical test. Strategic Management Journal, 21, 31-49.

[28.] USDA. 2013. Nigeria Food Processing Ingredients Market. U.S. Dept. of Agriculture Foreign Agricultural Service. https://www.fas.usda.gov/data/nigeria-food-processing-ingredients.

[29.] Xuechang Z, Jingbin W, Bin L and Xiaoyi D (2019). Inventory Stickiness, Environmental Dynamism, Financial Constraints and Survival of new SMEs in China. Journal of Manufacturing Technology Management. Emerald Publishing Limited 1741-038X DOI 10.1108/JMTM-11-2019-0401. Pp8.