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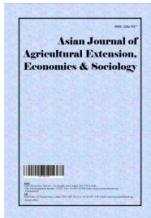
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## **An Analytical Assessment of Financial Crisis in Developing Countries, Its Effects, Consequences and Implications**

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### **Authors' contributions**

*This work was carried out in collaboration between both authors. Authors ACI designed the study, performed the statistical analysis, wrote the protocol, and wrote the first & second draft of the manuscript. Author JJC managed the analyses of the study and managed the literature searches. Both authors read and approved the final manuscript.*

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### **ABSTRACT**

This research was borne out of the need to revisit the global financial crisis and re-examine the issue of how well policy responses by developing countries in Africa have fared in addressing the crisis. In the analysis of the effect of financial crisis, two specific periods were chosen, the period during the financial crisis, and a period after the financial crisis, a decade later. The data used in the analysis of the crisis include: Current account as a percentage of GDP, external debt as a percentage of gross national income, exports of goods as a percentage of GDP, openness of the economy, economic growth rate, inflation rate, credit to the private sector by banks as a percentage of GDP and foreign direct investment inflows as a percentage of GDP. The findings of this research reveal that the global financial crisis is long gone, but its effect on many developing countries continues to deepen as the prolong and protracted effect of the crisis continues to linger. The crisis has not only caused a serious setback on the growth momentum gained by developing countries, but it also may endanger hard won economic development strides garnered over the recent years.

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## 1. INTRODUCTION

In describing the occurrence of the global financial crisis, many public finance academics and practitioners have described it as a natural disaster [1,2,3]. Tsunami, floods, storms and earthquakes have been used as metaphors to describe the colossal destructive power and the enormity of the scale of the financial forces that have been uncorked by the financial crisis [4,5]. Certainly, this depiction is commendable as it informs on the magnitude of the financial crisis, however it is not exactly true in one respect. Financial crisis is not a natural disaster in any way imaginable; it is a manmade disaster that is the product of poor decisions made by individuals, businesses and government which hinges around corrupt financial management practices –the financial crisis could easily have been averted if these decisions were made differently, and thus led entirely different outcomes [6,7].

The occurrence of financial crisis is not limited to developed countries such as America, Japan and the United Kingdom; developing countries also have to deal with the consequences of financial crisis as well. They are facing financial crises and it has far reaching consequences due to incompetency of their leaders and decision makers [8]. In fact, research has revealed that developing countries find it more difficult in addressing the consequences of financial crisis [9]. A primary reason for this lies in the fact that most developing countries have unstable political institutions, weak financial institutions and fragile financial markets [10]. And as a result, developing countries may not be armed with the necessary tools to respond, tackle and address financial crisis head on.

More importantly, the aftermath of the financial crisis tends to erode most of the modest gains made by developing countries in the last decade in relation to improved economic growth, reduction in poverty and inequality [11]. The economic and social achievements made by developing countries may likely be lost as a result of the financial crisis. Widespread financial and economic crisis have been known to disrupt and reduce both the rapid pace of trade and export expansion in developing countries [12,13]. Also, it significantly reduces the capital inflow and remittances that are received by developing countries, and by so doing, worsening and

already bad situation [14]. Consequently, developing countries such as Nigeria cannot afford to ignore, disregard and pay little or no attention to the issue of financial crisis. Financial crisis is real, financial crisis are harmful to economic growth, economic development, wreak havoc to the financial system and inflict untold hardship and suffering on people in countries experiencing financial crisis [15].

A cursory look at the literature on financial crisis in developing countries in Africa tends to reveal that research tends to pay more attention to economic crisis, not much attention and due consideration is given to the study of financial crisis in developing countries [16]. A Google search with keywords such as financial crisis and developing countries reveals that very few papers have been written on the subject matter. This research sets out to fill that vacuum by identifying, discussing and examining how developing countries responded to the global financial crisis in 2007. Twelve years have gone by since the last financial crisis, and questions regarding whether developing countries have recovered from external shocks caused by the crisis? To answer this question, data on current account as percentage of gross domestic product (GDP), external debt as a percentage of gross national income, export of goods as a percentage of GDP, trade openness, economic growth, inflation, credit to private sector by banks as a percentage of GDP and foreign direct investment as a percentage of GDP. This paper begins by defining and explaining the term financial crisis. It goes on to describes the effects of financial crisis on developing countries, explains the methods used to investigate the research and analyses and discusses the findings of the data.

### 1.1 Financial Crises

A financial crisis is a disruption to financial markets in which adverse selection and moral hazard problems become worse, so that financial markets are unable to efficiently channel funds to those who have the most productive investment opportunities [17,18]. In a financial crisis, there is a steep decline the value of asset prices, as a result, consumers and businesses are incapable of paying their debts, and as a result banks experience liquidity shortage [19]. The emergence of a financial crisis is normally associated with the occurrence of one or more of

the following events [20]: large scale balance sheet problems (of households, firms, governments and financial intermediaries); significant changes in asset prices and credit volumes; serious interruptions in financial intermediation and supply of finance to various sectors and actors of the economy; and large scale government intervention (in the form of provision of liquidity and recapitalization).

## 2. LITERATURE REVIEW

The literature has identified some of the predisposing factors driving financial crisis, however there is still a considerable difficulty in unravelling their underlying causes of the crisis [18,21,22,20]. In explaining the likely causes of the crisis many economic and finance theories have been put forth some reasons for the occurrence of financial crisis. While there is an agreement that financial crisis is triggered by external or internal shocks, and macroeconomic imbalances [23,24,25,26].

Still, there are many unanswered questions regarding the exact causes of the crisis [20]. At times, a likely cause of financial crisis may be as a result of uncertainty that has occurred in the financial markets, this may be as a result of one or more of the following: political instability, an economic recession, a failure of a major financial institution, and stock market crash [12]. In other instances, financial crisis may be driven by irrational factors which include: credit crunches, bank runs, financial contagions, emergence of asset bubbles, and limitations to arbitrage during periods of stress [27]. In explaining financial crisis, the idea of animal spirit as the cause of financial market disturbance has taken up a considerable space in the finance literature [28,29].

### 2.1 Traditional Views on Financial Crisis Revisited

The traditional views of financial crisis in the finance literature can be classified into two polar schools of thought, the monetarists versus a more eclectic perspective put forth by Hyman Minsky and Charles Kindleberger. The monetarist have maintained that financial crisis results from banking panics [30]. Banking panics are considered an important source of financial crisis because the monetarist view them as an important source of contractions in the money supply which, consequently leads to severe contraction in aggregate economic activity.

Monetarist differentiate between what they refer to as real financial crises and pseudo financial crisis. Real financial crisis are largely as a result of banking panics, while pseudo financial crisis result from business failures, sharp decline in asset prices, but are not likely to result in banking panic and a resultant acute decline in money supply.

A different view of financial crisis held by Minsky (1975) and Kindleberger [29] who have a broader explanation of what should be regarded as a real financial crisis when compared to the monetarist view. They suggest that financial crisis either involves failure of both large and non-financial firms, sharp deterioration in asset prices, disinflation or deflation, disruption in foreign exchange markets or some combination of any or all of these. They argue than any disturbance in the economic system can have serious consequences for the whole economy, and in the event of a financial crisis, the roles and responsibility of government should be expanded. One shortcoming of Minsky-Kindleberger perspective of a financial crisis is that it fails to supply a robust theoretical underpinning of what constitutes a financial crisis and as a result it could be broadly used as a reason for government intervention that may not necessarily benefit the economy as a whole. The monetarist view of financial crisis is not without its flaw - it is regarded as narrow in focus and it is limited to bank panics and the resultant effect on money supply.

### 2.2 Asymmetric Information and its Influence on Financial Market

The global financial crisis occurrence can easily be explained in theory, as a problem of asymmetric information [31,32]; Bernanke, 2010). In practice, asymmetric information causes problems in the financial system in two ways; prior to the entrance of a transaction (adverse selection) and after a transaction has executed (moral hazard).

Adverse selection occurs in the financial market when the prospective borrowers seeking a loan are most likely to default and produce undesirable outcome - that is the bad credit risk are the ones that are most likely to be selected [18]. Since adverse selections tends to make it possible for loans to be advanced to bad credit risks in the marketplace. This outcome was first described in a seminal research paper by Akerlof [33], he observed that a lemon problem could

occur in the debt and equity market when bank lenders have difficulty in ascertaining whether a lender is a good risk or bad risk.

Moral hazard occurs in the financial market after a loan has been extended to a prospective borrower and the lender has to deal with the possibility that the borrower might engage in activities that may result in the loan not repaid and as such increases the possibility of a default [33]. Moral hazard results largely from asymmetric of information since the lender has no knowledge of the borrower's intention to default as the borrower is unlikely to face the consequence of his action. Moreover, moral hazard occurs as a result of the enormous enforcement costs that makes it almost impossible for the lender to prevent its occurrence even when the lender is fully aware of the borrower's activities.

### **2.3 Effect of Financial Crisis in Developing Countries**

In the literature, there are significant disputes in terms of the effect of financial crisis in developing countries, Blanchard et al. [27] suggests that some of the short-term impact of a financial crisis are decrease in terms of trade, decrease in exports and an increase in capital outflows. Claessens and Tong [34] maintains that a financial crisis is likely to spread through financial and trade channels and in turn distorts expectations of businesses and consumers, this in turn changes investment and consumer behaviours. Three main channels are discussed here (i) reduction in financial flows to developing countries, (ii) reduction in export earnings, and (iii) banking failures and reduction in bank lending

### **2.4 Reduction in Financial Flows to Developing Countries**

In general, most developing countries are in need of financial inflows from developed and emerging countries to increase economic growth and development. These flows include but are not limited to investment inflows (both foreign direct investments (FDI) and portfolio investments), official development assistance (ODA), flows of remittances and trade credit. During a financial crisis, all these financial inflows are negatively affected during a financial crisis [19]. Action Aid estimated the decline in global financial flows to developing countries as US\$400 billion dollars.

The financial crisis tightened credit, lowered profits and turnover for firms in emerging and developed countries. Consequently, this led to a revision of their planned investment downwards and adopt a wait-and-see approach [35]. The increasing level of uncertainty caused by the financial crisis in developing countries is linked to the food and fuel crisis that explains the severe decline in FDI. For example, in the first quarter of 2008, Nigeria, Angola, Guinea and Democratic Republic of Congo, each received an estimate of \$1.5 billion in FDI, however in the 2<sup>nd</sup> quarter of 2008 and the 1<sup>st</sup> quarter of 2009, a number of investment initiatives in manufacturing and natural resources were placed on hold [36].

Second, there is the likelihood that private investments to emerging and developing countries will continue to decline as risk averse investors proceed with caution by moving intended funds to safer investment havens. This reduction in financial flows will affect both portfolio and FDI. Reduced portfolio investment flows will negatively affect government borrowing by escalating the costs of commercial debt and sovereign bonds, both are considered important sources of finance for developing countries – have increased sharply. Also, FDI in developing countries recorded significant decline. In the past seven years, FDI to developing countries recorded its highest feat of US\$500 billion in 2007. With the global financial crisis, it was expected that FDI to developing countries will decrease by 15% in 2008 [1]. Kasekende et al. [37] observed that FDI to countries such as India and Turkey declined by 45 per cent in 2008, greatly worsening their balance of payment position. This is most likely to be compounded by decline in commodity prices in many parts of Africa, since most FDI in the continent is resource-dependent.

Third, world trade or international trade depends on extension of trade credit; an estimated 75% of trade is financed by short-term credit. With credit tightening beginning to bite, trade finance in developing countries has significantly been reduced as financial institutions limit their risk exposure. The trade gap that has emerged as a result of the financial crisis is an estimated US\$ 32 billion [38]. Although, it might seem to be a relatively small sum, it has important multiplier effects. Subsequently, there will be multiple pressures on developing countries trade as a result of reduced trade credit and reduced demand for exports.

## 2.5 Reduction in Export Earnings

For developing countries, commodity exports are one of the main drivers of economic growth [39]. A decline in commodity prices will be harmful to the export earnings of a significant number of countries that are main exporters of commodities. In Africa, there are a large percentage of countries dependent on commodity prices as a major source of export earnings. In the last decade, price of most commodities, including nickel, copper, platinum, gold and petroleum have risen to new record highs, and have contributed significantly to economic growth in these countries.

However, since November 2008 commodity prices have been on the decline. The price of oil for instance fell by more than 82% in the third quarter of 2008. The predicament facing many commodity exporting developing countries is well demonstrated by the case of a South African company, a main exporter platinum group metals (PGMs). As the price of platinum declined, the country, was already experiencing a large balance of payment deficit, and caused the value of its currency, the rand, decline further by almost 35 percent, against the US dollar. The fall in commodity prices also affected copper prices. This resulted in a substantial drop of export earnings for Zambia and a significant reduction in its foreign exchange reserves. Since the second quarter of 2008 the volume of volume of reserves produced by the mining sector declined by 35% from \$645 million during the first quarter of 2008 to \$419 million during the second quarter of the year.

In reality, the negative impact of the financial crisis on export commodity prices and financial inflows in developing countries threatens to reverse the enormous gains from the recent economic performance of developing economies. Key consequence of declining commodity prices include reduction in government funding capacity, declining foreign exchange reserves, non-profitability of oil fields that have high operation and extraction costs and postponement of a number of investments in the mining sector that are highly dependent on foreign direct investment. The effect of the financial crisis hit both oil producers, oil exporters and non-energy commodities such as minerals and agricultural products. Agricultural products are also following a downward trend and it is estimated that these products have lost 25% of their value since the financial crisis. The decline

in food prices should act as a palliative to reduce the impact of financial crisis on developing countries, especially on government budget and balance of payments.

## 2.6 Bank Failures and Reduction in Bank Lending

In the wake of the subprime global financial crisis in the US, an initial concern for the rest of the world was the occurrence of financial contagion. A contagion is the spread a financial crisis from one market, region or country to another and its occurrence can be at both a domestic or international level. The concerns and danger were genuine, that financial markets and institutions in developing countries would be negatively affected by the financial crisis. This could happen through direct and indirect channels.

Directly, banks and financial institutions in developing countries could be affected to the degree that they hold financial assets contaminated by subprime mortgage crisis. For developing countries in Africa, the effect of direct transmission of the financial crisis was prevented by the under developed financial system. In Africa, external financing from developed countries in terms of private borrowing, stocks and bond issues is quite low, representing only 3.5% in 2008 of overall issues of developing economies [37]. Moreover, the banking system that suffered losses as a result of the financial crisis are those that have an existence of foreign banks (Madagascar, Mozambique and Swaziland).

Indirectly, there is a more serious threat of the financial crisis to developing economies through global credit tightening, declining stock market prices, volatility of capital markets and exchange rates have resulted in a decrease in the low capital inflows to developing countries. Consequently, this reduces capital of banks and other financial institutions and may cause a reduction in lending as these banks struggle to shore up capital. A reduction in bank lending normally will have a negative impact on economic growth, reduced investments and increase the levels of unemployment as many businesses downsize production activities.

Furthermore, the decline in bank lending will also affect government borrowing and increase the debt burden as well as cause some debt servicing difficulties for some countries. In Nigeria, foreign investors withdrew \$14 billion

from the stock market in January 2009, the stock market capitalization declined by 45% and the all share index fell by 60% by March 2009. In other African countries, such as Benin, Uganda, Kenya, Zambia and Uganda, the capital markets lost more than 25% in 2009. Some other African countries that have integrated financial markets suffered a direct effect of the financial crisis and negative spill overs. Ghana and Kenya had delayed plans for bond issuance of a \$275 million debt and \$475 million Eurobond.

## 2.7 Financial Crisis and Responses in Developing Countries

In the event of a financial crisis, a two-pronged approach is taken to address it: A short-term and a long-term policy response is applied [35,18,40] (Bernanke, 2010). The short-term policy measures are targeted at ensuring the following (i) containment of the financial crisis, disrupt, distort and dismantle the financial contagion, (ii) restoring confidence in the financial systems in the local and global markets and (iii) minimizing the intended effect of the financial crisis on the real economy.

To contain the financial crisis, the following measures are usually adopted: guaranteeing on bank deposits and interbank loans, providing of liquidity to financial institutions in need and leniency on meeting regulatory requirements [38]. Furthermore, other measures taken during a financial crisis are focused on resolving the balance sheet difficulties of banks affected by the crisis, and it involves direct liquidity injection, allowance of mergers and acquisitions and there is the possibility of bank nationalization. As earlier stated, the extent to which developing countries were affected by assets contaminated by subprime mortgages is slim, as many developing country banks restricted relationship with international banks.

For the long term, policy measures are mostly focused on reforming, strengthening and deepening the international financial system. To achieve this financial development is an essential ingredient that enables the attainment of long-term policy objective. Financial development can easily be described as is part of a collective effort (public and private sector) development initiative intended to stimulate economic growth, reduce unemployment, reduce inequality and rising levels of poverty in developing countries as well as decreasing transaction costs incurred in the

financial system. Consequently, financial deepening of the financial system results in the provision of broader access to credit, increases the growth of entrepreneurship, creates an enabling environment for economic diversification and enhances the efficiency, and strengthens the efficacy of the financial sector that enables the efficient application of monetary and fiscal policies [41].

## 2.8 Study Objectives

1. To examine the effect of the financial crisis on financial flows in developing countries
2. To examine the effect of financial crisis on the current account balances
3. To examine the effect of the financial crisis on trade openness

## 3. METHODS AND MATERIALS

In analysing financial crisis two specific time periods were selected, 2007 and 2017. 2007 is the exact period the financial crisis occurred and 2017 is a decade later to see how well developed countries have fared after the crisis period. In analysing financial crisis, the following indicators were used: current account as percentage of GDP, external debt as a percentage of gross national income, exports as a percentage of GDP, trade openness, economic growth, inflation, credit to private sector by banks as a percentage of GDP and foreign.

Previous studies on financial crisis have used these same indicators to assess the effect of financial crisis on the domestic economy, and it is expected that financial crisis worsens current account balances, exacerbates existing debt problems, and heavily reduces export earnings and also disrupts economic growth during the period of the crisis [42,43,44]. In conducting the research, 33 countries in Sub-Saharan Africa were examined and the effect of the crisis was analysed in the initial year of the occurrence in 2007 and then a decade later in 2017. This research follows similar methodologies applied by Gourinchas and Obstfeld [31] and Rojas-Suarez [32] in analysis of a financial crisis, two specific periods were chosen, the period during the financial crisis, and a period after the financial crisis, a decade later. This expansive length of time is considered long enough for any developing country to have recovered significantly from the aftermath of a financial crisis. Furthermore, the

period in question is long enough to weigh the effect of the short term and long-term policy responses for countries in Sub-Saharan Africa.

### 3.1 Data Collection

The financial data from various secondary sources was collected, sifted and was organized. Different financial reports, both from international financial institutions and country specific financial department were analysed

### 3.2 Data Analysis

In the event of a financial crisis, the literature has identified measures that are targeted to mitigate the crisis [45], in the short term and the long term. The immediate short-term policies are targeted at ensuring that (i) the financial crisis is mitigated, (ii) that confidence in the financial and capital market are restored and that (iii) the impact of the crisis on the economy is reduced to the barest minimum. In the longer term, the focus for developing countries should be on returning normalcy to the financial system, that capital flows, export earnings, bank lending, fiscal account and current account imbalances should be restored to normal levels, in the least [46,47,48].

Gourinchas and Obstfeld [31] and Rojas-Suarez [32] have identified several indicators and constructed an index on a country's ability to deal with external shocks and withstand the impact of negative external shocks. They argue that the capacity of a developing country to withstand further financial crisis is dependent on the country's levels of external need for external financing, liquidity positions, and external solvency. Rojas and Suarez [32] maintain that a developing country will be in better position to deal with external shocks when the following ratios are small (i) total debt to GDP, (ii) short-term external debt to gross international reserves and (iii) current account deficit to GDP. The debt ratios are measures of solvency, while the current account deficit represents the external needs of a country.

## 4. RESULTS AND DISCUSSION

### 4.1 Re-examination of Financial Crisis in Developing Countries

In the aftermath of a financial crisis, it is expected that current account balance should deteriorate,

as trade deficit positions for most developing countries will worsen during the crisis period. The possibility and potential of a current account deficit in causing disruptions and distortions in the financial market has been extensively examined in the literature. Lawrence Summers a former US Deputy Treasury secretary stated in the Economist that 'close attention should be paid to any current account deficit in excess of 5 percent of GDP.'

By applying this standard to the data in Table 1, a number of developing countries in our sample provide genuine reason for concern. As Table 1 reveals, in 2007, 60% of the countries have a negative current account deficit ranging from -16.25% to -0.65%. A decade later the problem is worse with an estimated 78% of the countries having a negative current account deficit ranging from -19.55 to -0.518. Compared to other countries in this sample Gabon, Botswana and Nigeria appear to be the only countries who have a current account surplus 10 years after the financial crisis. Unfortunately, persistent high current account deficit in developing countries can lead to foreign exchange crises and sudden capital outflows that are usually associated with policy inconsistency. Obviously, there is more to the issues that have worsened an already complex problem.

Still, another important element that is affected by a financial crisis is the level of debts. Blanchard et al. [27] maintain that during a financial crisis, trade balances and exports suffer and are likely to deteriorate and lead to increasing levels of debt. In periods of a financial crisis, there is likely to be increasing levels of public and private debts that can result in a liquidity problem. In some instances, liquidity problems emerge when anxious external creditors in response to rapid devaluation or balance of payment crisis become unwilling to extend existing short-term crisis. Consequently, in situations where a large fraction of a country's external debt is short term, a crisis may worsen in the form of a liquidity shortfall and the inability of a country to extend its short-term liabilities.

As the results in the Table 1 indicate, the external debt servicing as a percentage gross domestic product for a large number of countries has been mixed with some countries who have positively reduced their debt profile significantly. The following countries have made tremendous improvement in reducing the levels of debt

Liberia, Zimbabwe, Gambia, Cote D Ivoire and Togo. Liberia had the worst external debt profile as a percentage of GDP in 2007; it stood at 309%. Zimbabwe followed next with an external debt profile of 118%. Ten years later, these countries have significantly reduced their debt profile to 38.45% and 58.10%. Some other African countries headed in the opposite direction and worsened their external debt as a percentage of GDP. These countries saw total debt servicing as a percentage of gross domestic product deteriorate more than 30 percentage points. Zambia, Mozambique and Rwanda appear to be more severe, in these cases the decline was in double digit percentage points; 48.04%, 64.56% and 37.69%.

Data on export as a percentage of GDP position provides some evidence of how serious the financial crisis in 2007 could have been for developing countries in Africa. A cursory look at Table 1 reveals that 8 countries in Africa had attained an estimated 40% export to GDP ratio in 2007, by the year 2017 that number had declined to only 2 countries. The effect of the global financial crisis has taken a toll on the African export market as fewer countries are capable of exporting at the 2007 level. The following countries, Angola, Botswana, Gabon and Liberia were severely affected. These countries recorded massive decline in exports as a percentage to GDP ratios, with Liberia and Angola recording the worst decline with 50.7% and 38.91% respectively. All is not gloom with the export to GDP ratio, some countries despite the difficult economic environment recorded massive exports gains, these countries include Equatorial Guinea and Burkina Faso whose increment export as a percentage of GDP is 32.15% and 19.8%. In general, most countries saw a decline in the export to GDP ratio, when compared to those who recorded a positive increment in the export to GDP ratio. The openness to trade indices appears to have similar results with the export to GDP ratio. More African countries saw their openness to trade indices shrink by a few percentage points. Although the decline in percentage terms is much smaller than the decline attained in the export to GDP ratio. The range in the decline of openness to trade indices between 56% and 1%. The most severe cases in decline in openness is recorded by Angola and Zimbabwe.

Table 2 presents the data on the following economic growth, credit to private sector by

banks as a percentage of GDP, inflation rate and foreign direct investment as a percentage of GDP for the year 2007 and 2017 for developing countries in Africa. With regards to the growth rate, the overall picture appears very clear with significant high grow rates in the early 2000's before the global financial crisis. Economic growth rates averaged more than 6% of GDP, some countries such as Angola and Equatorial Guinea recorded between 14% and 15% of GDP. In 2017, the economic growth rates for developing countries in Africa presented a much bleaker picture, with significant drop-in growth rates. Economic growth rates averaged less than 3.5% of GDP. Countries such as Ethiopia and Cote D Ivoire which outperformed the rest of the countries in the table were only able to attain a 9.5% and 7.7% of GDP. Growth rates had drastically declined from double digits to single digits. Thus far, economic growth rates in 2017 are a far cry below what it was in 2007 during the onset of the financial crisis.

Economic growths rates are connected to the levels of inflation, higher inflation discourages and negatively influence growth rates; high levels of inflation result in low levels of domestic productivity and increasing levels of unemployment. Inflation is a crucial and important tool in the analysis of current account, external debt sustainability and foreign direct investment flows. In situations where currency values are semi-fixed or fixed and domestic rate of inflation is above foreign rates of inflation, an appreciation in real currency can lead to decreasing cost of competitiveness, and eventually undermine the credibility of the peg.

Data on inflation in the sample of developing African countries is presented in Table 2. The general picture of inflation in the sample countries is quite clear in all countries, inflation rates were modest, and on the average for all the countries in the sample inflation was 4.85 percent in 2007. Two countries had extreme levels of inflation that year; Gabon and Cote D Ivoire whose inflation rates were 17.24 and -8.9%. By 2017, the average rate of inflation for countries had shot up by 2% points. This does not give a true picture of the inflation rates; some countries had seen massive increase in the rates of inflation such as Angola, Botswana and Somalia whose inflation rates when up by 19.44%, 19.62% and 6.57% respectively.

**Table 1. Current account as percentage of GDP, external debt as a percentage of gross national income, export of goods as a percentage of GDP and trade openness**

	2007	2017	2007	2017	2007	2017	2007	2017
Angola	16.21	-0.518	20.69	44.45	67.91	29	108.06	52.26
Benin	-8.946	-10.003	14.92	31.57	22.59	27.29	57.80	35.22
Botswana	15.123	5.377	4.17	10.21	54.52	39.9	95.10	73.87
Burkina Faso	-8.27	-7.25	21.70	26.25	10.55	30.35	35.42	66.57
Cameroon	1.27	-2.718	14.11	30.58	28.89	18.5	58.49	41.19
Chad			24.85	31.95	44.50	33.87	84.73	73.58
Cote d'Ivoire	-0.68	-2.75	73.64	36.81	47.23	33.7	89.44	64.76
Equatorial Guinea					23.55	55.57	134.08	97.69
Ethiopia	-4.201	-6.8112	13.14	32.82	33.17	7.63		31.11
Gabon	22.093	0.986	47.16	46.29	58.3	20.8	85.13	75.07
Gambia	-6.194	-7.364	90.56	44.73	36.05	22.49	44.29	61.48
Ghana	-9.607	-3.394	17.43	38.92	24.5	35.2	65.35	73.65
Lesotho	21.74	-4.4651	28.82	32.30	52.1	41.5	161.77	125.25
Liberia	-16.25	-8.421	309.97	38.45	74.9	24.2		122.99
Madagascar	-13.34	-0.569	32.01	30.43	30.3	30.9	66.70	65.34
Malawi	-9.43	-22.43	19.69	34.77	23.31	29.61	56.41	65.33
Mali	-7.134	-7.88	23.35	29.15	24.15	22.2	56.65	58.03
Mozambique	-7.542	-19.559	59.4	123.96	27.33	38.58	63.19	99.72
Namibia	8.5667	-4.116			50.8	37.5	106.30	84.13
Niger	-8.185	-15.655	25.50	38.52	17.43	16.62	47.35	49.59
Nigeria	10.031	2.767	4.60	10.92	21.24	13.17	39.34	26.35
Rwanda	-7.296	-7.7618	16.32	54.01	15.46	3.14	40.34	50.99
Senegal	-9.175	-7.221	18.19	43.40	20.10	21.81	57.89	57.41
Sierra Leone	-7.148	-14.069	24.34	47.27	15.60	26.05	40.30	74.09
Somalia				41.69		22.05		
South Africa	-5.4009	-2.549	25.06	53.34	31.7	29.63	63.68	57.97
South Sudan								
Sudan	-7.837	-3.747	46.36	19.33	21.89	9.69	44.55	21.51
Tanzania	-7.85	-3.063	23.33	35.31	19.83	15.1	48.06	32.24
Togo	-8.114	-2.005	74.94	34.25	25.7	33.1	51.40	76.85
Uganda				13.76	46.05	16.73	18.19	46.78
Zambia	-1.238	-3.89	22.83	70.87	33.59	35.15	65.77	
Zimbabwe	-9.734	-1.349	118.24	58.10	37.79	18.99	84.17	48.34

Source: *World Development Indicators (2019)* [49]

As earlier stated, global financial crisis did not directly impact the banking sector in developing countries in Africa, and it appears that the data on credit to private sector by banks as a percentage of GDP is the only variable which saw some modest increase over the period of time in question. In 2007, credit to private sector by banks as percentage of GDP was 13.3% on the average. By 2017, credit to private sector by banks as a percentage of GDP has seen some increment, its value on the average had increased to 17.45%. Credit is a crucial link in money transmission, as it finances consumption, production and capital formation which can in turn influence economic activity. A second important link in money transmission is foreign direct investment flows, generally during a crisis, there is a tightening of credit, a reduction in

capital flows, profits and turnovers for businesses in developed and developing countries. The average inflow of foreign direct investment as a percentage of GDP for the countries in the sample was 2.63% in 2007. In 2017, the average inflow of foreign direct investment as a percentage of GDP had increased marginally to 2.88%. As the data reveals, developing countries still struggle in attracting significant amounts of foreign direct investment and 12 years after the financial crisis, the story remains the same.

#### 4.2 Financial Crisis in Developing Countries Appears Protracted and Prolonged

From a theoretical perspective, the traditional views espoused for cause of a financial crisis fail

to explain the cause of the financial crisis, the monetarist view of a crisis resulting from bank panic or the eclectic views expressed by Hyman Minsky and Charles Kindleberger fell short in explaining the cause of the global financial crisis. A more apt explanation of the cause of the recent global financial crisis is an asymmetric of information problem [31,32], (Bernanke, 2010). However, as earlier mentioned developing countries in Africa have under-developed financial institutions and markets and this has

given them some kind of protection from the direct transmission of the global financial crisis. Although there was no direct transmission of the financial crisis to developing countries, developing countries still suffered from the crisis. The financial crisis impact on developing countries was worsened by a period of high unanticipated volatile commodity and exchange rates, which heightened economic uncertainty and reinforced a vicious circle of declining trade flows and investments.

**Table 2. Economic growth, inflation, credit to private sector by banks as a percentage of GDP and foreign direct investment as a percentage of GDP**

	2007	2017	2007	2017	2007	2017	2007	2017
Angola	14.01	-0.15	12.25	31.69	9.774	15.42	-1.368	-6.05
Benin	5.99	5.84	1.298	0.079	16.72	22.634	2.328	2.169
Botswana	8.28	2.91	7.08	3.308	22.57	31.378	4.521	1.0715
Burkina Faso	5.66	6.35	-0.23	0.361	14.313	31.328	0.32	0.02
Cameroon	4.9	3.55	0.921	0.64	8.85	14.46	0.84	2.33
Chad	3.27	-2.99						
Cote D Ivoire	1.77	7.70	-8.974	3.66	2.397	9.673	-3.723	2.423
Equatorial Guinea	15.28	-4.69	1.89	0.685	17.8	26.45	2.17	2.55
Ethiopia	11.46	9.50	2.803	0.7443	2.802	16.2	9.507	2.474
Gabon	6.01	0.48	17.24	7.26	18.52		1.12	3.35
Gambia	3.04	4.82	5.03	2.65	9.952	10.25	5.268	10.05
Ghana	4.35	8.14	8.03		7.427	5.369		
Lesotho	4.83	-0.228	10.73	12.37	14.41	12.87	5.58	5.51
Liberia	9.54	2.47	8.01	5.31	9.61	17.58	4.4	1.68
Madagascar	6.24	3.93	11.39	12.41	5.19	13.08	9.58	7.54
Malawi	9.60	4.00	10.28	8.28	10.134	14.094	0.474	1.18
Mali	3.49	5.4	7.95	11.54	5.47	10.46	2.8	4.3
Mozambique	7.73	3.74	1.14	1.75	16.14	25.87	2.52	3.64
Namibia	5.37	-0.87			10.3	24.27	3.99	17.54
Niger	3.15	4.89	6.54	6.14	48.23	50.4	7.66	3.39
Nigeria	6.59	0.81	0.05	2.79	9.31	15.5	2.3	4.16
Rwanda	7.63	6.12	5.3	15.5	14.8	15.6	2.18	0.93
Senegal	4.94	7.08	9.08	8.27	12.4	20.6	2.12	2.96
Sierra Leone	8.06	4.21	5.85	1.31	15.79	29.43	2.45	2.78
Somalia			11.64	18.21	4.28	4.99		
South Africa	5.36	1.41						8.51
South Sudan			6.17	5.18	78.29	65.56	2.19	0.58
Sudan	11.52	4.28						
Tanzania	6.77	6.79			12.7	8.84	3.27	2.78
Togo	2.29	4.36	7.05	5.31	11.1	13.55	2.66	2.21
Uganda	8.41	3.86	0.94	-0.98	22.5	39.1	2.34	1.83
Zambia	8.35	3.4						
Zimbabwe	-3.65	4.7	10.6	6.57	9.62	11.14	9.41	3.34

Source: World Development Indicators (2019) [49]

In general, the impact of the 2007 financial crisis still lingers for most of the developing countries examined in the study. Financial crisis distorts and disrupt economic activities through direct and indirect channels and the result is tightening of credit which tends to have a negative influence on consumption, production, capital flows and trade flows [45,50,51]. The current account for developing countries examined reflect this distortion. On the average, the current account deficit for 2007 was -2.07%, by 2017 it had declined marginally to -4.86%. While this suggests that the impact of the crisis may not have been that severe, the result is misleading to some extent as it fails to reveal the individual peculiarities in how developing countries responded to the crisis. With some developing countries in a better position to manage the adverse shocks created by the crisis compared to others. Such countries such as Gabon and Nigeria were among those who improved their current account after the crisis. In the case of Gabon and Nigeria, their current account deficit was reduced by 21.01% and 7.262% respectively.

On the average, when a comparative analysis is done on the 8 parameters (current account as percentage of GDP, external debt as a percentage of gross national income, export of goods as a percentage of GDP, trade openness, economic growth, inflation, credit to private sector by banks as a percentage of GDP and foreign direct investment as a percentage of GDP), the research finds only 25% of the parameters that is external debt as a percentage of GDP and credit to private sector by banks as a percentage of GDP have improved modestly, when compared with the 2007 financial crisis values. For example, external debt as a percentage of gross national income average value was 37.2%; in 2017 the value had become 36.86%. In the case of credit to private sector by banks as percentage of GDP, the average value in 2017 surpassed the 2007 value by 4.07%.

The implication of the finding is that the 2017 average value for current account as a percentage of GDP, exports of goods as a percentage of GDP, trade openness, economic growth, inflation and foreign direct investment as a percentage of GDP have not been able to attain the previous values in 2007. Economic growth and inflation for instance in 2007 had an average value of 6.6% and 4.85%. In 2017, the average value for economic growth had declined to 3.39 and inflation had increased to 5.18%.

These results should be of a bit of concern for developing countries as it implies that many developing countries in Africa are vulnerable if there is an occurrence of another financial crisis any time soon. 80% of the countries in the sample fail to make the 5% of current account deficit as a percentage of GDP.

On the average, while the external debt to gross national income appears to have improved modestly, a closer inspection of individual countries tells a different story, that the debt profile for many of these developing countries is increasing. Liberia, and Zimbabwe for instance have an external debt as a percentage of gross national income at 309% and 110% of a GDP. Three other African countries have external debt as percentage of GDP in excess of 50%. These figures, are modest in some way as they refer only to external debt profile, the domestic debt profile of these countries have not been taken into consideration. The researcher is convinced that if the domestic debt profile is included, the debt profile of many developing countries in Africa would be far worse than the average 36% of gross national income.

A fair assessment of the current climate after the global financial crisis in developing countries so far reveals some mixed results. According to Wim [19] in dealing with a financial crisis, a short and a long-term measure are employed. The short-term measures include but are not limited to the following containing of the financial crisis, restoring confidence in the financial system and minimizing the effect of the financial crisis on the real economy. Since the financial crisis affected developing countries through indirect channels, developing countries in Africa did not contend with containment or restoring confidence in the financial system. However, they have had to battle with minimizing the effect of the financial crisis on the real economy. If the economic growth rate and the rate of inflation are yardsticks of assessing how well developing countries in Africa have fared after the financial crisis.

## 5. CONCLUSION

This paper set out to examine the effect, consequences and implication of the 2007 global financial crisis on developing economies in Africa 12 years after the incident. We analyse three channels through which the financial crisis is likely to affect developing economies: reduction in financial flows, drastic fall in export earnings,

and bank failures and reduction in bank lending. The current global financial crisis has a major impact on developing countries that is likely to last for many decades to come. The reasons are obvious, with the weak financial architecture, increasing debt burden, and the large dependence on commodity exports to earning income – places developing countries in a precarious and vulnerable position. Also, it is important to state that the impact of the global financial crisis on developing countries occurred through indirect channels, this is because the financial infrastructure of most developing countries remains, weak, unsophisticated and is not integrated into the global financial system.

To forestall the effect of such financial crisis on developing countries, it is important that policy makers in developing countries go beyond short term solutions aimed at containing and mitigating the effect of the crisis on the real economy, and restoring confidence in the financial system. There is the need for developing countries to embrace genuine financial reforms that is aimed at strengthening the financial infrastructure of developing countries. However, as the traumas and consequence of the financial crisis becomes a forgotten memory, there are genuine fears that policy makers in developing countries may stall the implementation of long-term critical reforms or worse develop cold feet. And as a result, the financial challenges in developing countries remains almost the same, with no significant progress made to resolve the issues at stake.

## 6. RECOMMENDATIONS

For developing countries, it is important for them to build greater resilience to financial and economic shocks. To do this, diversification and restructuring of their economies has become important, the heavy reliance on primary commodities as a major source of revenue has to be addressed, and it is important that alternative to develop other sources of income. A crucial element is to strengthen diversification of exports, developing countries need to go beyond exporting primary commodities to adding value on the commodities they export. For example, Nigeria as a country continues to export crude oil after so many decades, if Nigeria decides to refine the crude before it exports it, substantial value has been added and that will also increase the price of the product at the world market. Also, for developing countries that are heavily dependent on primary commodities, it is possible

that the use of long-term contracts and fixed prices may be helpful in dealing with price fluctuation.

In general, the banks in developing countries are weak and fragile and there is the need to restructure the banking and financial system. Many banks are undercapitalized and it has become urgent that such banks be recapitalized through any of the flowing measures; massive capital injection by the government or from foreign and/ or domestic investors. However, in cases were the banks are clearly insolvent, there is the need for government in developing country to intervene and a decision has to be made among the following possible alternatives: recapitalize the banks, merge the bank with existing banks to make them stronger or close the banks and sell whatever is left of the bank's asset.

Finally, it is important that the monetary authorities in developing countries improve banking supervision and regulation by spending resources and time to identify banking system fragilities. To do this, there is the need for them to be vigilant and put in place specific measures to identify banking system vulnerabilities. A practical thing to do, is to identify existing banks that are fragile or vulnerable and are most likely to encounter difficulties in the current economic climate. More importantly, banking supervision should request the banks to submit high frequency data to continuously assess bank solvency and liquidity and to enable the conducting of stress tests and credit risk diagnostics. Banking supervision should be meticulous and comprehensive too, and where possible, it should cover banking risk management practices, foreign currency risk, funding reliability and lending standards. Also, supervision should extend to credit creating and deposit-taking institutions, including non-bank financial institutions.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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