
A REVIEW OF THE IMPACT OF EXTERNAL SHOCKS ON MONETARY POLICY EFFECTIVENESS IN NON-WAEMU COUNTRIES

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Abstract: In this paper, the extant literature on the impact of external shocks on monetary policy effectiveness with reference to non-WAEMU countries is reviewed. The importance of this literature review is to provide contemporary perspectives to scholars and policymakers on the relevance of the incidence of external shocks to the effectiveness of monetary policy with reference to non-WAEMU countries. The literature reviewed in this study shows that, on the whole, the extent and the degree to which external shocks are transmitted to the domestic economy substantially depend on a plethora of features, namely the absence of exchange rate flexibility; a strong export concentration, especially with respect to commodities; the level of global economic integration; restricted capacities of production; the absence of competitiveness in exports; over-reliance on foreign aid; foreign reserves that are not adequate and capital account openness.

Keywords: external shocks; monetary policy; monetary aggregate targeting; non-WAEMU countries.

JEL Classification: F15, F36, F42.

1. Introduction

The relevance of external shock in the business cycles of various countries has been substantially covered in the literature. A literature review of such coverage is important to provide both scholars and policy makers with valuable insights into the stock of extant knowledge on the subject. This literature review is even more

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worthwhile as it pertains to the effects of external shocks on monetary policy effectiveness. Based on the underlying premise, the purpose of this paper is to review existing studies on how monetary policy effectiveness is influenced by external shocks. Moreover, in order to situate the focus of the present study within the context of the extant literature, it is worthwhile to clearly articulate how the paper departs from extant literature reviews.

Beniak (2019) has provided a literature review of central bank digital currency and monetary policy with insights into how, with the rapid digitalization of payment externality in terms of time and cost efficiency, a survey is needed of the existing knowledge on the subject. This is because, among others, rapid digitalization is associated with potential security and legal ramifications, as well as with concerns surrounding less effectiveness in monetary policy transmission and financial instability. According to insights from the survey, central banks are considering and putting to test solutions based on which innovations (e.g., digital cash) in payment facilities would be backed by such central banks.

Twinoburyo and Odhiambo (2018) surveyed the theoretical and empirical literature on the relationship between economic growth and monetary policy to provide more insights into the inclusive nature of the relationship. The authors demonstrate that most of the findings in the literature are supportive of the importance of monetary policy in driving economic growth, principally in financially advanced countries where central banks have been characterized to be independent and fair. However, the nexus appears weaker in developing countries with financial markets that are weak and less integrated with the global financial markets. The authors conclude that, despite the documented ambiguous relationship in the existing studies, in the long and the short run, monetary policy is relevant and, hence, developing countries engage supply-side deficiencies through structural reforms, as well as fast-tracking the development and integration of their financial markets with those of other world economies.

Djatche (2020) reviewed linkages surrounding banks' risk-taking, prudential policy and monetary policy to provide insights into, on the one hand, the interaction between prudential and monetary policies via corresponding effects on the risk-taking of banks and, on the other hand, concerns on their coordination. It is apparent that there are ambiguous impacts on the profitability of banks and, by extension, their risk-taking behavior. Despite the underlying prudential and monetary policies reflecting different objectives, they nonetheless interact through raise challenges confronting policymakers that are indispensable in ensuring financial stability. These findings are broadly consistent with Lubis, Alexious and Nellis (2019), who assessed what is known so far about the implementation of macroprudential and monetary policies. Broniatowska (2020) has been interested in how monetary policy is transmitted in the aging population and has reviewed the

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literature on how changes in a population structure engender variations in the effectiveness of monetary policy transmission channels, while Lin (2019) reviewed the literature on the ongoing research on the nexus between debt leverage and monetary policy in China. According to Lin (2019), structural monetary policy should adjust to structural issues in debt leverage because the employment of monetary tools is simply orderly guidance of corresponding sectors on account of maintaining the sound monetary policy. Other recent country-specific literature reviews on the monetary policy include a study on Japan's monetary policy with a particular focus on the use of a short-term interest rate as a target of the operation (Shibamoto, Takahashi & Kamihigashi, 2020).

Bhattarai and Neely (2016) surveyed recent empirical literature on the unconventional monetary policy of the United States (US) on the real economy and financial markets in order to grasp the feasibility of corresponding policies. It is apparent from the survey that event studies support the evidence that announcements of US unconventional policy have substantially affected equity prices, exchange rates and international bond yields. Comunale and Striaukas (2017) also examined unconventional monetary policy within the framework of low inflation and interest rates with a particular focus on the plethora of approaches employed to articulate monetary policy, notably different shadow rates, spreads related to principal component analysis and synthetic indices. Overall, the incidence of the shocks in unconventional monetary policy is found to be significant, irrespective of methods and studies.

In light of the above, post-2016 literature review studies on monetary policy have not assessed the impact of external shocks on the effectiveness of monetary policies. The purpose of this study is to fill this identified gap. The importance of this literature review is to provide contemporary perspectives to scholars and policymakers on the relevance of the incidence of external shocks in the effectiveness of monetary policy and, by extension, place the future theoretical and empirical research on the subject within the context of extant studies by making a case for such future research.

In the study, a comprehensive and systematic literature review approach is used to evaluate and analyze the theoretical and empirical literature on the relationship between external shocks on monetary policy effectiveness. The methodology involves a critical survey of literature that attempts to evaluate the inter-temporal relationship between external shocks and monetary policy effectiveness. In order to gain insights into the issues being investigated, the study used secondary information from articles, integrated statistics, official websites and books in order to understand what extant studies have been covered on the impact of external shocks on monetary policy effectiveness.

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This introduction is followed by a theoretical literature review in Section 2 and the empirical literature review in Section 3. Section 4 concludes the study with suggestions for future research.

2. Theoretical literature

Building on the available contemporary literature (Oladunni, 2020; Binge, 2020), macroeconomic shocks (whether they are domestic or external) do influence fluctuations in the business cycle. As Rebelo (2005) articulates, the Great Depression was associated with a multitude of shocks that included severe droughts, instability of financial systems, and a substantial decrease in the price of agricultural commodities. Some notable shocks that have been documented in the corresponding literature as significant determinants of business cycles entail fiscal shocks (Baxter & King, 1999; Binge, 2020); productivity and technology shocks (King & Rebelo, 1999; Coskun, 2020); variations in the spending of government (Fisher, 2003; Zouri, 2020); energy price shocks (Rotemberg & Woodford, 1996; Finn, 2000; Zouri, 2020) and monetary shocks (Bernanke, Gertler & Gilchrist, 1996; Binge, 2020). When economies are open, their business cycle movements are affected by external shocks which include, demand shocks, shocks in foreign monetary policy, oil price shocks and terms of trade shocks (Oladunni, 2020; Ezeaku, Asongu & Nnanna, 2021).

2.1. Categorization of shocks

The macroeconomic stability of a country can be affected by many factors such as deficits and debts (Saungweme & Odhiambo, 2018; Aimola & Odhiambo, 2018; Mawejje & Odhiambo, 2020), savings (Simelane & Odhiambo, 2019) and unemployment (Simionescu & Naros, 2019; Neagu, 2020). An external shock is considered by an institution such as the International Monetary Fund (IMF) to denote an exogenous or unanticipated variation from an expected and/or normal trend (Varangis, Varma, de Plaa & Nehru, 2004). According to the corresponding literature, an external shock represents an event that requires an adjustment or a response because it has a considerable effect on the economy and is also out of the government's control. On the related concerns as to what encompasses a substantial effect and which shocks are entirely exogenous, Varangis et al. (2004) posit that a distinction should be made between shocks that are slow at impacting the economy (e.g. droughts and changes in prices) and shocks are very sudden in occurrences (e.g. natural disasters like hurricanes and earthquakes). The latter can easily be identified given that the scale can be measured with some confidence and the duration can be established with some degree of accuracy. Conversely, the former starts unexpectedly; and unfolds slowly and the externalities are difficult to evaluate.

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Another dimension by which shocks can be categorized is whether such shocks are output or input shocks (Chen, Zhu & Zhong, 2020; Luo, 2020; Fang, Lin & Lin, 2020). The extant literature considers an input shock as a shock that is linked to the source of variation within an economy, such as a natural disaster or terms of trade. Conversely, an output shock is related to the effect of the disturbance, which is measured in terms of a trend output or export earnings variation. A shock in consumption takes into account the effect of deviations in the trend of consumption. Moreover, a transmission channel is a process through which input shocks become output shocks. Such a channel of transmission is largely contingent on factors such as the policy environment, institutional quality, and the economy's structure.

A temporal element can also be used to characterize shocks such that these shocks feature as variations in the conditional average of stochastic processes driving a given model (Williams & Gray, 2020). Kydland & Prescott (1982), in a real business cycle model, analyzed and discussed shocks as the consequence of variations in the conditional average of productivity, also known as technology or productivity shock. In terms of monetary policy shock, studies have assessed shocks as impacts of temporary variations in the conditional average of innovations (Woodford, 2003; Christiano, Eichenbaum & Evans, 2005). Shocks are linked to temporal variations in the conditional average of the real interest rate (Mendoza, 1991; Neumeyer & Perri, 2005) as well as terms of trade shock or first terms of trade moment (i.e. mean) (Mendoza, 1995) have also been investigated. In more contemporary literature, shocks have also been associated with temporal variations linked to the standard deviation (or second moments) instead of the mean (or first moments) of the stochastic process (Karlsson & Österholm, 2020). This has been qualified as time-varying standard deviations or stochastic volatility (Tchamyou & Asongu, 2017; Tchamyou, Asongu & Nwachukwu, 2018).

Another perspective through which shocks can be categorized is in terms of demand and supply (Kilian, 2009). In the corresponding literature, supply shocks are linked to a considerable deterioration in the country's aggregate position of supply, which unfavorably affects the economy's structural balance, thus engendering high unemployment and prices. This category of shock could be the result of an abrupt drop in the rate at which raw materials are supplied and/or a positive change in the prices of input (e.g. high inflation and unemployment and low output resulting from a substantial drop in oil prices). A demand shock, conversely, captures a change in the expectations of consumers that is temporary as an exogenous deviation, which fails to engender positive co-movements between employment, output, and inflation (Lorenzoni, 2009).

External shocks can also be viewed from the angle from which they are decomposed. For instance, Vegh (2013) posits that two classifications are apparent,

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notably – (a) terms of trade shocks or external shocks that are real; and (b) changes in the rate of foreign inflation or external nominal shocks. The categorization builds on evidence from several studies that such external shocks are fundamental in affecting the economies of developing and emerging economies, especially in terms of welfare, price stability and economic growth (Raddatz 2007; UNCTAD, 2002; Berg et al., 2011). According to this strand of literature, such relatively poorer countries are vulnerable to shocks in terms of trade and natural disasters.

2.2. Channels of external shock transmission

In order to grasp the magnitude, nature and sources of shocks, mechanisms by which such shocks affect the economy should be investigated. This is partly because the mechanism of external shock informs policymakers with insights into other measures that can be used to offset or limit the shock effects (Chowla, Quaglietti & Rachel, 2014). There are three fundamental transmission mechanisms of external shocks that have been documented in the literature – uncertainty, external trade and financial channels.

First, the uncertainty mechanism is likely to increase foreign shocks because uncertainty is usually apparent when economic agents are not optimistic about the global and/or domestic macroeconomic conditions. Accordingly, in periods when the macroeconomic outlook is plagued with uncertainty, economic agents often differ in their decisions about spending, given that firms often postpone decisions of investment when such macroeconomic outlook is not favorable (Bernanke, 1983; Bloom, 2009). This is because high costs are associated with high uncertainty for both households and the markets, given that to compensate for future risks; the market rate of return also increases. The literature refers to the cross-border transmission of shocks via spillover and contagion impacts (Kaminsky & Schmukler, 2003).

A distinction is made by Kaminsky and Schmukler (2003) and Asongu (2012) between spillover and contagion effects. According to the authors, a contagion refers to a period that results in considerable immediate impacts in a plethora of nations after a shock, for which externalities are imminently apparent and progress within a short interval of time (days or hours). However, with regard to a spillover, while the primary international response can be slow, the effect increases protracted and gradually engender substantial economic ramifications. External shocks of common tendency such as oil prices and global interest rates are not taken into account in the definition of contagion by the authors on the premise that excess cross-country co-movements in economic and financial variables are apparent in response to a shock that is common. Accordingly, the degree to which an external shock affects an economy is contingent on the level of integration of the underlying economy with the global economy and trading partners. The

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propagation of external shocks is largely weaker for nations that are less open to and/or integrated with the global economy. Accordingly, the more an economy is open, the more it is susceptible to spillover and contagion impacts.

Second, the external trade mechanism operates through the impact income has on demand. A negative shock in foreign demand, everything being equal, lowers international export demand. The reduction in exports reduces earnings exports, increases domestic unemployment, leads to depreciation in the exchange rate and increases recession possibilities in countries that rely on trade. In a scenario of an external shock, aggregate production decreases, given pressures on inputs costs for firms which lead to cross-border cost-push inflation.

Third, the financial channel is another mechanism that is largely mirrored via enhanced global flows of liquidity in favorable times when credit is restricted as well as during periods when financial stress leads to volatility in asset prices. It is important to note that while the trade channel operates via the exchange of commodities (i.e. goods and services), the financial mechanisms are fundamentally premised on the cross-country exchange of financial assets. Three sub-channels make up the financial mechanisms, notably- the credit, funding, and nonbanking mechanisms. (a) The credit mechanism operates via the exposure of financial institutions in the domestic economy to foreign institutions by means of foreign subsidiaries. Accordingly, domestic agents can be unfavorably affected when the risks are linked to the exposure of domestic banks to foreign banks. (b) The funding mechanism works via the reliance of domestic financial institutions on financial resources from sources that are offshore. Accordingly, many domestic financial institutions with credit lines linked to foreign financial institutions could have such facilities reduced or stopped if the foreign institutions are faced with concerns of liquidity. This tendency affects business operations and international transactions of the customers of domestic banks (Chowla *et al.*, 2014). (c) The non-banking mechanism focuses on how external shocks are transmitted via the ownership of liabilities and assets at the domestic level by the public that is non-bank. A considerable effect can be generated from the participation in the foreign portfolio and foreign direct investment via the "wealth effect" when it comes to a substantial shock in the domestic economy. Losses at the offshore that firms and households bear via foreign investment portfolios can cause them to considerably reduce domestic spending and engender reversals of capital that could multiply to an abrupt stop.

3. Empirical kinds of literature

3.1. Response of monetary policy to external shocks

It is important to note that the impacts of external shocks as apparent in small open developing countries (i.e. in the Middle East, Asia, Africa and Latin America) are

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not similar to those experienced by leading industrialized countries such as the Great Seven (G-7) nations. However, the incidence of external shocks on the macroeconomic dynamics of developing countries remains open to debate, especially as it relates to whether the effects are significant or insignificant.

To put the above lack of empirical consensus into perspective, using an example of one of the countries in the proposed non-WAEMU countries such as Nigeria, the present paper illustrates how conflicting tendencies have been established in the literature. While some studies support the position that macroeconomic dynamics such as inflation, output, government expenditure and money supply are not affected by oil price shock in Nigeria (Adam & Goderis, 2008; Omisakin, 2008), another strand of the literature supports the view maintaining that oil price significantly impacts money supply, unemployment and real output while an insignificant effect on the consumer price index is apparent (Umar & Abdulhakeem, 2010). This latter strand is consistent with Akpan (2009), who has shown that output, inflation and exchange rate are significantly sensitive to the movement of oil price in Nigeria, as well as Alege (2015), who finds that the business cycle of Nigeria is affected by nominal and real shocks. To put this into perspective, a business cycle can also be assimilated to monetary policy shocks given that according to Burns and Mitchell (1946) and Skare and Stjepanovic (2016), business cycles are fluctuations apparent in the aggregate economic activity of countries in which work is organized mainly in terms of business enterprises with a cycle entailing periods of expansion, recessions, contractions and revivals that are followed by economic expansion for the next cycle. Building on these insights into the conflicting positions on the incidence of external shocks on macroeconomic dynamics which include monetary policy, the corresponding literature that follows is skewed towards non-WAEMU countries and categorized into two main strands, notably: studies that have found no significant impact and papers that have established a significant effect.

In the first strand on studies that have established no impact of external shocks on macroeconomic dynamics, Adam and Goderis (2008) conclude that because of financial reforms and political commitments over the previous decade, there is a possibility for the first time in history that prospects are now genuinely apparent for Central Banking in Nigeria that is independent. It follows that; hence, monetary policy can play a more central role in the macroeconomic management of the country. In another study, Omisakin (2008) has employed a forecast error variance decomposition analysis to investigate the effect of oil price shocks on macroeconomic performance in Nigeria for the period 1970-2005. The author concludes in terms of monetary policy that oil price shock does not have substantial impacts on government expenditure and price level in the country. Contemporary studies in this strand are broadly consistent with the narrative from

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the non-contemporary stream. These include Shobande, Shodipe & Asongu (2019), who have established using a dynamic stochastic general equilibrium (DSGE) model that global factors account for the inability of the central bank of Ghana to forecast the behavior of financial and macroeconomic variables.

The second strand on studies that have established a significant effect of external shocks on macroeconomic dynamics (i.e. including monetary policy) can most aptly be summarized by Rafiq (2011), whose findings have shown that compared to flexible exchange rate regimes, pegged regimes are poorer at hedging an emerging market that is commodity-dependent from real shocks such as disturbances in terms of trade. Hence, according to the author, macroeconomic stability can better be maintained in an emerging oil-exporting country if flexible exchange rate regimes are apparent.

Focusing on Ghana in non-WAEMU countries, Houssa, Mohimont & Otrok (2015), employ recursive restrictions within a Bayesian VAR modeling framework to examine the incidence of domestic and international shocks on the evolution of business cycles in Ghana. Using South Africa as a benchmark, the authors show that credit and world productivity shocks concerning the G-7 countries are more apparent in South Africa compared to Ghana. It is also shown that shocks from the commodity market influence business cycles in both countries. Moreover, global shocks in the credit market have less of an impact on Ghana when compared with productivity; suggesting that compared to financial channels, trade channels are more relevant to Ghana's integration with the world economy. Hence, the importance of recognizing the relevance of the primary goods sector compared to the financial sector in macroeconomic policy responses in commodity-exporting nations such as non-WAEMU countries.

While for the interest of space, not all contemporary and non-contemporary studies in both strands can be comprehensively covered, what is apparent is that there is no consensus in the literature surrounding the effect of external shocks on monetary policy in developing countries in general and non-WAEMU countries in particular. This is corroborated by Quaidoo (2018), as apparent in the next section on monetary policy effectiveness in the non-WAEMU countries. A summary of the corresponding literature discussed is provided in Table 1.

Table 1 Summary of studies on the response of monetary policy to external shocks

Author(s)	Research	Methods	Sample	Results
Abradu-Otoo, Amoah & Bawumia (2003)	Monetary policy transmission in Ghana	Structural VECM	Ghana	There is strong evidence of monetary policy instruments affecting output and inflation in the Ghanaian economy in

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				the long run. Moreover, the exchange rate mechanism remains the main channel through which monetary policy operates.
Adam & Goderis (2008)	Monetary policy and oil price surges	Process tracing	Nigeria	Historical insights are provided on the nexus between monetary policy and oil price surges.
Omisakin (2008)	Oil price shocks and the Nigerian economy	VAR models	Nigeria with annual data between the periods 1970-2005.	Oil price shocks have varying effects on macroeconomic dynamics (real gross domestic product, real oil revenue, consumer price index, real money supply, real government capital expenditure, and real government recurrent expenditure)
Chuku (2009)	Measuring the effects of monetary policy innovations in Nigeria	Structural VAR	Nigeria	Various tendencies on the effects of monetary policy shocks on output and prices in Nigeria are provided.
Umar & Abdulhakeem (2010)	Oil price shocks and the Nigeria Economy	VAR models	Nigeria	The findings demonstrate that oil prices have a significant impact on unemployment, money supply, and real GDP.
Touray (2013)	Effectiveness of monetary policy transmission channels in the Gambia	VAR models	The Gambia	Various monetary and fiscal policy insights and recommendations are provided.
Houssa, Mohimont and	Sources of Business Cycles	Bayesian VAR	Ghana	Global shocks play a role in the business

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Otrok (2015)	in a Low Income Country	model		cycle in Ghana and such shocks are transmitted through three channels: trade, credit, and commodity prices.
Shobande, Shodipe and Asongu (2019)	Global shocks alert and monetary policy responses	DSGE	Ghana	Global factors account for the inability of national central banks to predict the behavior of macroeconomic and financial variables among sampled developing nations.
Lavally and Nyambe (2019)	Effectiveness of monetary policy transmission mechanisms	VAR	Sierra Leone	Cointegration exists and there is causality from gross capital formation to exchange rate and real interest rate. Findings from impulse response and variance decomposition are also provided.
Tule, Ajilore and Ujunwa (2019)	Monetary policy contagion in the West African Monetary Zone (WAMZ)	VAR	WAMZ countries	Building on findings, it is recommended that monetary authorities in the WAMZ should collectively address the concern of how to stabilize the regional economy in response to monetary policy shocks that are emanating from Nigeria.
Kamara and Zuo (2020)	Effectiveness of monetary policy transmission in Liberia	VAR	Liberia	Differing levels of effectiveness of various channels of monetary policy effectiveness are provided.

VAR: Vector autoregression. DSGE: Dynamic Stochastic General Equilibrium.

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3.2 Monetary policy effectiveness in non-WAEMU countries

Quaidoo (2018) has studied monetary policy effectiveness in the proposed West African Monetary Zone (WAMZ) to conclude that mechanisms of monetary policy transmission are heterogeneous across the various countries making up the potential monetary union. According to the author, whereas the mechanism of interest is not effective in various WAMZ nations, the lending mechanism of the bank is effective exclusively in the Gambia and Ghana. Moreover, the author established that in Nigeria, there is evidence of the exchange rate mechanism. In the light of the apparent heterogeneity, the study recommends that member States constituting the WAMZ should enhance their domestic financial markets to consolidate financial intermediation to achieve the stability of prices in the zone through monetary policy mechanisms. To put the above heterogeneity into perspective, some country-specific studies are discussed in what follows.

In the Gambia, the monetary policy channel has been examined by Touray (2013) with quarterly data for the period 1991:1 to 2012:2. The analytical technique employed is the VAR approach. Employing monetary base and rediscount rate as instruments of monetary policy, the author established that price and real output are reactive to changes in monetary policy, in accordance with mainstream economic theory. Moreover, a significant impact on real output was exclusively from the rediscount policy rate. In addition, monetary base shocks engendered domestic currency depreciation, whereas variations in discount rates were associated with modest pass-through to lending rate.

In Ghana, studies have focused on mechanisms of monetary policy transmission (Abradu-Otoo, Amoah & Bawumia, 2003) as well as on how the retail market rate is affected by the policy rate via interest rate pass-through (Acheampong, 2005; Kovanen, 2011; Sakyi, Osei Mensah & Obeng, 2017). From the first perspective, Abradu-Otoo et al. (2003) have used structural vector error correction model (SVECM), quarterly data (i.e. from 1969:4 to 2002:4), monetary policy indicators (i.e. treasury bills and broad money) and impulse response functions that are generalized to establish that, though with expected signs, none of the policy variables has engendered a significant impact on real output and inflation. Moreover, while the exchange rate mechanism appeared to be associated with real output and inflation positively, the considered mechanisms of monetary policy transmissions were not strong.

In the second perspective of the strand of Ghana, Acheampong (2005) employs the error correction model with monthly data for the period 1994:9-2004:2 to examine the monetary policy rate (or treasury bill rate) pass-through to the deposit and lending rates of central banks. It is found that variations in money market rate influence interest rates only modestly. Moreover, a shift in policy does not engender an impact on the rate of borrowing, though some effects on the banks'

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lending decision rate are apparent. Kovanen (2011), within the same context of Ghana, has shown that while in the retail market, the corresponding pass-through to lending and deposit rates were incomplete and protracted, the rates of the wholesale market respond modestly to variations in the rate of monetary policy. Loloh (2014) shows that the inflation rate and the exchange rate pass-through are positively linked, while Sakyi et al. (2017) find that in the long-term, commercial banks do not experience complete deposit and lending rate policy rates pass-through. The adjustment in the short term also revealed modest transmission to the deposit and lending rate from the prime rate.

As concerns Guinea-Conakry, the IMF (2018) has documented six main perspectives for understanding the effectiveness of monetary policy owing to external shocks in the country - these are understood as monetary and exchange rate policies. These include the need to: (i) gradually build external buffers that are worthwhile in consolidating the resilience of Guinea to commodity price shocks; (ii) further strengthen operations in the foreign exchange market to support more flexibility in the exchange rate; (iii) tailor monetary policy towards the maintenance of moderate inflation levels; (iv) consolidate liquidity management to enhance the framework of monetary policy; (v) boost the importance of financial and operational autonomy of the country's central bank and (vi) take on board 2018 recommendations related to the 2018 assessments on safeguards to consolidate internal audit and the financial reporting transparency at the country's central bank.

In Liberia, Kamara and Zuo (2020) have analyzed the effectiveness of the transmission channels of monetary policy. Accordingly, they have assessed the impacts of monetary policy on inflation and real per capita using three main monetary policy channels, namely, bank lending, money supply and exchange rate. The Johansen cointegration technique, the VAR and VECM are used on quarterly time series data from 2006Q1 to 2019Q4. Of the three engaged mechanisms, it is found that the exchange rate mechanism is the most effective channel for the effect of domestic price and is a poor predictor of potential output per capita. The findings, therefore, suggest consolidation of monetary policy from the exchange rate targeting perspective. Moreover, the combined impact of banking mechanisms and the money supply was also effective in impacting output by means of transmitting monetary impulses. The authors also suggest improvements in the coordination between monetary and fiscal authorities in order to ensure macroeconomic stability that guarantees low inflation, job creation and inclusive growth.

It is important to recall that monetary operations in the country (i.e. Liberia) have generally been restricted in terms of scope since these were established in 1999 (Kamara & Zuo, 2020). Following the narrative from Kamara and Zuo (2020), the

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employment of monetary policy rate (MPR) by the Central Bank of Liberia (CBL) has largely not been in operation, thus limiting the significance of the role of the interest rate. Thus, the monetary policy framework of the country has fundamentally been based on managing a floating exchange rate regime which is a form of exchange rate focusing on exchange rate stability that is broad in the absence of a band. The findings from Kamara and Zuo (2020) are important because, to the best of the authors' knowledge, it is the first empirical research focusing on monetary policy transmission in Liberia.

In Nigeria, Chuku (2009) has employed a recursive SVAR approach on quarterly data for the period 1986:1 to 2008:4 to assess the impacts of shocks from monetary policy (measured as broad money, real effective exchange rate, and minimum rediscount rate) on the price level and output. The findings show that monetary aggregates engender mild impacts on the price level and output with a corresponding fast speed to adjustment. Moreover, the real effective exchange rate and interest rate did not have a significant incidence on output and price level. Ogun & Akinlo (2010) have used quarterly data for the period 1986-2006 and the SVAR empirical strategy to show that in monetary transmission, the bank mechanism is ineffective in the light of deregulatory measures in the country. Adenekan & Ahoritor (2013) have examined the monetary transmission channel, employing the VAR approach and using quarterly data from 2000 to 2009 to find that exchange, credit, and interest rate channels are modest, which reflects a financial system that is shallow and weak. Moreover, broad money is stronger and more robust in affecting the movement of prices in the country.

As concerns Sierra Leone, the mechanisms of monetary transmission have been assessed by Ogunkola & Tarawalie (2008) using quarterly data from 1990:1 to 2006:2 within a vector error correction (VEC) model empirical framework. The authors find that instruments of monetary policy influence domestic output and prices as anticipated, and there is also evidence of a bank lending channel in the country. More recently, Lavalley & Nyambe (2019) have used the VAR approach on annual time series data for the period 1980 to 2012 to understand the effectiveness of monetary policy transmission mechanisms (i.e. exchange rate, interest rate, and credit channels) in orientating economic activities in the country. The results show that - (i) cointegration is apparent; (ii) real interest rate and exchange rate are Granger caused by the gross capital formation and (iii) from impulse responses, as interest rate increase, output positive response to monetary shocks while for private domestic credit and exchange rate, output revealed that even in the long term, the impacts of shocks may not be transitory for steady-state convergence

In the light of the above, it is apparent that most studies in the WAMZ have focused on Ghana and Nigeria and the corresponding findings are inconclusive.

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Despite these disparities, it is relevant to understand whether contagion of monetary policy is apparent among the WAMZ countries. Tule, Ajilore and Ujunwa (2019) have assessed how Nigeria's monetary policy affects other WAMZ countries. The authors have used quarterly time series data for Nigeria and three countries of the WAMZ from 1980 to 2016 to assess how shocks in monetary policy from Nigeria affect macroeconomic dynamics in the engaged WAMZ countries. Their findings validate the position that there are substantial geographical nexuses within the WAMZ region via which fluctuations in the macroeconomy are transmitted. In the Gambia, the unanticipated shocks that result from Nigeria boost the exchange rate between the Gambia and the USA provides inflationary pressures and reduces economic growth (Tule et al., 2019). In Ghana, the monetary policy shocks from Nigeria dampen growth, leads to exchange rate depreciation and results in high short-term inflation (Tule et al., 2019). In addition to money supply expanding to accommodate growing demand, rising inflation and economic expansion, the currency appreciation in the Gambia is also experienced by Sierra Leone (Tule et al., 2019). It is recommended that monetary authorities in the WAMZ should engage collectively towards tackling the concern of the manner in which to stabilize the region with respect to monetary policy shocks from Nigeria (Tule et al., 2019).

4. Conclusion and future research directions

This study has reviewed the existing literature on the relevance of external shocks on monetary policy effectiveness in non-WAEMU countries. It follows from the established findings that empirical concerns remain heterogeneous regarding the comparative contributions of external shocks that are specific to business cycle processes. The literature has also shown that the extent and degree to which external shocks are transmitted to the domestic economy substantially depend on a plethora of features, namely the absence of exchange rate flexibility; a strong export concentration, especially with respect to commodities; the level of global economic integration; restricted capacities of production; the absence of competitiveness in exports; over-reliance on foreign aid; foreign reserves that are not adequate and capital account openness (Chileshe, Chisha & Ngulube, 2018; Binge, 2020; Zouri, 2020). Hence, every shock of external origin influences countries in various ways, which are contingent on the degree of vulnerability of the country to external shocks, as well as the mechanisms by which the shocks are transmitted. Therefore, as noted from the non-WAEMU countries, a proper understanding of the dynamics of external shocks is essential for a robust formulation and implementation of corresponding monetary policy responses that are effective in tailoring macroeconomic fundamentals to restore and/or improve macroeconomic equilibriums. The understanding of crucial business cycle-oriented

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shocks remains of interest to policymakers in a potential monetary area such as the WAMZ, which includes many resource-exporting economies. Given these insights, the findings of this review are consistent with Cashin and Sosa (2013) regarding the importance of accurately identifying and evaluating the origins of foreign perturbations and corresponding channels for their adjustments, which is crucial for designing appropriate monetary policy responses that are effective in addressing the underlying external shocks. In essence, the incidence of the external shock on the economy influences the sequence, intensity and choice of an appropriate policy response to the corresponding shock. The survey leaves major room for improving the extant literature, especially with regard to understanding how monetary policy effectiveness is designed and implemented in sparsely studied non-WAEMU countries in the Economic Community of West African States (ECOWAS) region, namely Sierra Leone, Guinea-Conakry, the Gambia and Liberia. Accordingly, the extant literature is dominated by studies focusing on Ghana and Nigeria. Hence, in future studies, it would be worthwhile to focus more on the corresponding sparsely studied non-WAEMU countries.

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Authors' Contributions

KS conceived the study and was responsible for the design and development. NMO supervised the research. Both authors revised the manuscript and approved the final version.

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References

1. Abradu-Otoo, P., Amoah, B., Bawumia, M., (2003), An investigation of the transmission mechanisms of monetary policy in Ghana: A Structural Vector Error Correction Analysis, Bank of Ghana Working Paper No. WP/BOG-2003/02, Accra.

Sedegah, K., Odhiambo, N.M., (2021)

A review of the impact of external shocks on monetary policy effectiveness in non-WAEMU countries

2. Acheampong, K., (2005), Bank interest rate channel of monetary policy transmission in Ghana, Bank of Ghana Working Paper No. WP/BOG05/10, Ghana.
3. Adam C., Goderis B., (2008), Monetary Policy and Oil Price Surges in Nigeria, In: Collier P., Soludo C.C., Pattillo C. (eds) Economic Policy Options for a Prosperous Nigeria, Palgrave Macmillan, London.
4. Adenekan, A.T., Ahoritor, C.R., (2013), An empirical investigation into the monetary policy transmission mechanism in Nigeria", The West African Monetary Review, 2 (1), pp. 89-117.
5. Aimola, A.U., Odhiambo, N., (2018), The Dynamics of Public and Private Debt in Ghana, Studia Universitatis "Vasile Goldis" Arad – Economics Series, 28(4), pp. 24-44.
5. Akpan, E.O., (2009), Oil price shocks and Nigeria's macro economy, Pages 22–24 of: A Paper Presented at the Annual Conference of CSAE Conference, Economic Development in Africa, March.
6. Alagidede, P., Ibrahim, M., (2017), On the Causes and Effects of Exchange Rate Volatility on Economic Growth: Evidence from Ghana, Journal of African Business, 18(2), pp. 169-193.
7. Alege, P.O., (2015), A Business Cycle Model for Nigeria, CBN Journal of Applied Statistics, 3(1), pp. 85-115.
8. Apanisile, O.T., Osinubi, T.T., (2019), Financial development and the effectiveness of monetary policy channels in Nigeria: a DSGE approach, Journal of African Business, 21(2), pp. 1-22.
9. Arestis P., (2017), Monetary Policy Since the Global Financial Crisis, In: Arestis P., Sawyer M. (eds), Economic Policies since the Global Financial Crisis, International Papers in Political Economy, Palgrave Macmillan, Cham.
10. Asongu, S.A., (2012), The 2011 Japanese earthquake, tsunami and nuclear crisis: Evidence of contagion from international financial markets, Journal of Financial Economic Policy, 4(4), pp. 340-353.
11. Asongu, S.A., (2014a), Correcting Inflation with Financial Dynamic Fundamentals: Which Adjustments Matter in Africa?, Journal of African Business, 15(1), pp. 64-73.
12. Asongu, S.A., (2014b), Does money matter in Africa? New empirics on long- and short-run effects of monetary policy on output and prices, Indian Growth and Development Review, 7(2), pp. 142-180
13. Asongu, S.A., (2017), Knowledge Economy Gaps, Policy Syndromes, and Catch-Up Strategies: Fresh South Korean Lessons to Africa, Journal of the Knowledge Economy, 8(1), pp. 211-253.
14. Asongu, S.A., Odhiambo, N.M., (2020), Challenges of Doing Business in Africa: A Systematic Review, Journal of African Business, 20(2), pp. 259-268.

Sedegah, K., Odhiambo, N.M., (2021)

A review of the impact of external shocks on monetary policy effectiveness in non-WAEMU countries

15. Bandura, W.N., (2020), Inflation and Finance-Growth Nexus in Sub-Saharan Africa, *Journal of African Business*, DOI:10.1080/15228916.2020.1838837.
16. Baxter, M., King, R.G., (1999), Measuring business cycles: approximate band-pass filters for economic time series, *Review of economics and statistics*, 81(4), pp. 575–593.
17. Beniak, P., (2019), Central bank digital currency and monetary policy: a literature review, Narodowy Bank Polski, Western Australian Treasury Corporation, MPRA Paper No. 96663, Munich.
18. Berg, A., Papageorgiou, C., Pattillo, C., Schindler, M., Spatafora, N., Weisfeld, H., (2011), Global shocks and their impact on low-income countries: lessons from the global financial crisis, IMF Working Paper 11/27, International Monetary Fund, Washington, DC.
19. Bernanke, B.S., (1983), Irreversibility, uncertainty, and cyclical investment, *The Quarterly Journal of Economics*, 98(1), pp. 85–106.
20. Bernanke, B.S., Gertler, M., Gilchrist, S., (1996), The flight to quality and the financial accelerator, *Review of Economics and Statistics*, 78(1), pp. 1–15.
21. Bhattarai, S., Neely, C., (2016), A Survey of the Empirical Literature on U.S. Unconventional Monetary Policy, Federal Reserve Bank of St. Louis, Working Papers No. 2016-21.
22. Binge L.H., (2020), Business Confidence and the Business Cycle in South Africa, In: Boshoff W. (eds), *Business Cycles and Structural Change in South Africa*, Advances in African Economic, Social and Political Development, Springer, Cham.
23. Bloom, N., (2009), The impact of uncertainty shocks, *Econometrica*, 77(3), pp. 623–685.
24. Broniatowska, P., (2020), Monetary policy and its transmission channels in an aging population. A literature review, Warsaw School of Economics Collegium of Economic Analysis Department of Economy.
25. Burns, A.F, Mitchell, W.C., (1946), *Measuring business cycles*, NBER Books.
26. Cashin, P., Sosa, S., (2013), Macroeconomic fluctuations in the Eastern Caribbean: The role of climatic and external shocks, *The Journal of International Trade & Economic Development*, 22(5), pp. 729–748.
27. Céspedes, J.F., Goldfajn, I., Lowe, P., Valdés, R., (2005), Policy Responses to External Shocks: The Experiences of Australia, Brazil and Chile, Working Papers Central Bank of Chile 321, Central Bank of Chile, Santiago.
28. Chen, J-Y., Zhu, X-H., Zhong, M-R., (2020), Time-varying effects and structural change of oil price shocks on industrial output: Evidence from China's oil industrial chain, *International Journal of Finance and Economics*, DOI: 10.1002/ijfe.1970.

Sedegah, K., Odhiambo, N.M., (2021)

A review of the impact of external shocks on monetary policy effectiveness in non-WAEMU countries

29. Chileshe, P.M., Chisha, K., Ngulube, M., (2018), The effect of external shocks on macroeconomic performance and monetary policy in a small open economy: evidence from Zambia, *International Journal of Sustainable Economy*, 10(1), pp. 18–40.
30. Chowla, S., Quaglietti, L., Rachel, L., (2014), How have world shocks affected the UK economy?, *Bank of England Quarterly Bulletin*, Q2, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2464076 (Accessed: 22/07/2020).
31. Christiano, L.J., Eichenbaum, M., Evans, C.L., (2005), Nominal rigidities and the dynamic effects of a shock to monetary policy, *Journal of Political Economy*, 113(1), pp. 1–45.
32. Chuku, A.C., (2009), Measuring the effects of monetary policy innovations in Nigeria: Structural Vector Autoregressive (SVAR) approach, *African Journal of Accounting, Economics, Finance and Banking Research*, 5(5), pp. 112-129.
33. Comunale, M., Striaukas, J., (2017), Unconventional Monetary Policy: Interest Rates and Low Inflation: A Review of Literature and Methods, (April 10, 2017), CAMA Working Paper No. 29/2017, Canberra.
34. Coskun, S., (2020), Technology Shocks and Non-stationary Hours in Emerging Countries and DSVAR, *Margin: The Journal of Applied Economic Research*, 14(2), pp. 129-163.
35. Djatche, M.J.N., (2020), Monetary Policy, Prudential Policy, and Bank's Risk-Taking: A Literature Review, GREDEG Working Papers 2020-40, Groupe de Recherche en Droit, Economie, Gestion (GREDEG CNRS), Université Côte d'Azur, France.
36. Emenike, K.O., (2018), Exchange rate volatility in West African countries: is there a shred of Spillover?, *International Journal of Emerging Markets*, 13(6), pp. 1457-1474.
37. Ezeaku, H.C., Asongu, S.A., Nnanna, J., (2021), Volatility of International Commodity Prices in Times of Covid-19: Effects of Oil Supply and Global Demand Shocks, *The Extractive Industries and Society*: Forthcoming.
38. Fang, H., Lin, F., Lin, S., (2020), The hidden cost of trade liberalization: Input tariff shocks and worker health in China, *Journal of International Economics*, 126 (September), 103349.
39. Finn, M.G., (2000), Perfect competition and the effects of energy price increases on economic activity, *Journal of Money, Credit and Banking*, 32(3), pp. 400–416.
40. Fisher, R.C., (2003), The changing state-local fiscal environment: A 25-year Retrospective, *State and local finances under pressure*, pp. 9–29.

Sedegah, K., Odhiambo, N.M., (2021)

A review of the impact of external shocks on monetary policy effectiveness in non-WAEMU countries

41. Goldberg, J.E., Klee, E., Prescott, E.S., Wood, P.R., (2020), Monetary Policy Strategies and Tools: Financial Stability Considerations, FEDS Working Paper No. 2020-074, Washington, DC.
42. Houssa, R., Mohimont, J., Otrok, C., (2015), Sources of Business Cycles in a Low-Income Country, *Pacific Economic Review*, 20(1), pp. 125–148.
43. IMF, (2018), First Review of the Arrangement Under the Three-Year Extended Credit Facility, Financing Assurances Review, and Request for Modification and for Waivers of Nonobservance of Performance Criteria, IMF Country Report No. 18/234, Washington DC.
44. Kamara, B.S., Zuo, D.Y., (2020), The effectiveness of transmission mechanism of monetary policy in Liberia, *West African Financial and Economic Review*, 20(12), pp. 153-175.
45. Kaminsky, G., Schmukler, S., (2003), Short-run pain, long-run gain: the effects of financial liberalization. National Bureau of Economic Research (NBER); George Washington University - Department of Economics.
46. Karlsson, S., Österholm, P., (2020), The relation between the corporate bond-yield spread and the real economy: Stable or time-varying?, *Economics Letters*, 186 (January), 108883.
47. Kilian, L., (2009), Not All Oil Price Shocks Are Alike: Disentangling Demand and Supply Shocks in the Crude Oil Market, *American Economic Review*, 99(3), pp. 1053-1069.
48. King, R.G, Rebelo, S.T., (1999), Resuscitating real business cycles, *Handbook of macroeconomics*, 1, 927–1007.
49. Kovanen, A., (2011), Monetary policy transmission in Ghana: Does the interest rate channel work?, IMF Working Paper No. 11/275, Washington DC.
50. Kydland, F.E., Prescott, E.C., (1982), Time to build and aggregate fluctuations, *Econometrica: Journal of the Econometric Society*, 50(6), pp. 1345–1370.
51. Lavally, M., Nyambe, J.M., (2019), The effectiveness of transmission mechanisms of monetary policy in Sierra Leone, *Journal of Economics, Management and Trade*, 23(2), pp. 1–13.
52. Lin, J., (2019), A Literature Review of Research on China's Monetary Policy and Debt Leverage, *Journal of Accounting, Business and Finance Research*, 5(2), pp. 36-42.
53. Loloh, W.F., (2014), Exchange rate pass-through in Ghana, Bank of Ghana Working Paper No. WP/BOG-2014/03, Accra.
54. Lorenzoni, G., (2009), A theory of demand shocks, *American Economic Review*, 99(5), pp. 2050-2084.
55. Lubis, A., Alexiou, C., Nellis, J.G., (2019), What Can We Learn from the Implementation of Monetary and Macroprudential Policies: A Systematic Literature Review, *Journal of Economic Surveys*, 33 (4), pp. 1123–50.

Sedegah, K., Odhiambo, N.M., (2021)

A review of the impact of external shocks on monetary policy effectiveness in non-WAEMU countries

56. Luo, S., (2020), Propagation of financial shocks in an input-output economy with trade and financial linkages of firms, *Review of Economic Dynamics*, 36 (April), pp. 246-269.
57. Mawejje, J., Odhiambo, N.M., (2020), Fiscal Reforms and Deficits in Tanzania: an Exploratory Review, *Studia Universitatis "Vasile Goldiș" Arad, Seria Științe Economice*, 30(1), pp. 57 –75.
58. Mendoza, E.G., (1991), Real business cycles in a small open economy, *The American Economic Review*, 81(4), pp. 797–818.
59. Mendoza, E.G., (1995), The terms of trade, the real exchange rate, and economic fluctuations, *International Economic Review*, 36(1), pp. 101–137.
60. Neagu, O., (2020), Real Wage Convergence in Romania: Empirical Evidence Based on Club Converging, *Studia Universitatis „Vasile Goldiș” Arad – Economics Series*, 30(3), pp. 108-117.
61. Neumeyer, P., Perri, F., (2005), Business cycles in emerging economies: the role of interest rates, *Journal of Monetary Economics*, 52(2), pp. 345–380.
62. Ogun, T.P., Akinlo, A.E., (2010), The effectiveness of bank credit channel of monetary policy transmission: The Nigerian experience, *African Economic and Business Review*, 8 (2), pp. 15-29.
63. Ogunkola, O.E., Tarawalie, A.B., (2008), Monetary policy transmission mechanism in Sierra Leone: A Vector Error Correction Approach, *CEAR Occasional Paper No. 2008–03*.
64. Oladunni, S., (2020), External Shocks and Optimal Monetary Policy in Oil Exporting Small Open Economies, University of Bath, Unpublished Ph.D. Thesis.
65. Omisakin, O.A., (2008), Oil price shocks and the Nigerian economy: a forecast error variance decomposition analysis, *Journal of Economic Theory*, 2(4), pp. 124–130.
66. Quaidoo, C., (2018), Effectiveness of monetary policy in West Africa Monetary Zone, University of Cape Coast, Unpublished Ph.D. Thesis.
67. Raddatz, C., (2007), Are external shocks responsible for the instability of output in low-income countries, *Journal of Development Economics*, 84(1), pp. 155-187.
68. Rafiq, M.S., (2011), Sources of economic fluctuations in oil-exporting economies: implications for choice of exchange rate regimes, *International Journal of Finance & Economics*, 16(1), pp. 70–91.
69. Rebelo, S., (2005), Real business cycle models: Past, present, and future, *The Scandinavian Journal of Economics*, 107(2), pp. 217-238.
70. Rotemberg, J.J., Woodford, M., (1996), Imperfect competition and the effects of energy price increases on economic activity, NBER Working Paper No. 5634, Cambridge, https://www.nber.org/system/files/working_papers/w5634/w5634.pdf (Accessed: 22/07/2020).

Sedegah, K., Odhiambo, N.M., (2021)

A review of the impact of external shocks on monetary policy effectiveness in non-WAEMU countries

71. Sakyi, D., Osei Mensah, I., Obeng, S.K., (2017), Inflation targeting framework and interest rates transmission in Ghana: An empirical investigation, *Journal of African Business*, 18(4), pp. 417-434.
72. Shibamoto, M., Takahashi, W., Kamihigashi, T., (2020), Japan's Monetary Policy: A Literature Review and Empirical Assessment, *Research Institute for Economics and Business Administration (RIEB)*,
<https://www.rieb.kobe-u.ac.jp/academic/ra/dp/English/DP2020-15.pdf> (Accessed, 13/07/2020).
73. Simelane, B., Odhiambo, N., (2019), The Dynamics of Savings Mobilisation in Lesotho, *Studia Universitatis "Vasile Goldiș" Arad – Economics Series*, 29(3), pp. 92-108.
74. Simionescu, M., Naros, M., (2019), The Unemployment of Highly Educated People in Romania. A Panel VAR Approach", *Studia Universitatis „Vasile Goldiș” Arad – Economics Series*, 29(3), pp. 20-37.
75. Shobande, O., Shodipe, O., Asongu, S., (2019), Global Shocks Alert and Monetary Policy Responses, *European Xtramile Centre of African Studies*, WP/19/066, Yaoundé.
76. Simo-Kengne, B.D., Viljoen, J., Nduku, P.M., (2020), Exchange Rate Pass-through to Producer Prices in South Africa: Evidence from Panel Contemporaneous Correlated Approach, *Journal of African Business*, DOI: 10.1080/15228916.2020.1826860.
77. Skare, M., Stjepanovic, S., (2016), Measuring Business Cycles: A Review, *Contemporary Economics*, 10(1), pp. 83–94.
78. Saungweme, T., Odhiambo, N., (2018), A Critical Review of the Dynamics of Government Debt Servicing in Zimbabwe, *Studia Universitatis "Vasile Goldiș" Arad – Economics Series*, 28(3), pp. 20-36.
79. Tchamyu, V.S., (2017), The Role of Knowledge Economy in African Business, *Journal of the Knowledge Economy*, 8(4), pp. 1189-1228.
80. Tchamyu, V.S., Asongu, S.A., (2017), Conditional market timing in the mutual fund industry, *Research in International Business and Finance*, 42 (December), pp. 1355-1366.
81. Tchamyu, V.S., Asongu, S.A., Nwachukwu, J.C., (2018), Effects of asymmetric information on market timing in the mutual fund industry, *International Journal of Managerial Finance*, 14(5), pp. 542-557.
82. Touray, S., (2013), Monetary policy effectiveness and transmission mechanism: The case of The Gambia, M.A. Thesis, The University of Edinburgh.
83. Tule, M.K., Ajilore, T., Ujunwa, A., (2019), Monetary Policy Contagion in the West African Monetary Zone, *Foreign Trade Review*, 54(4), pp. 375-398.

Sedegah, K., Odhiambo, N.M., (2021)

A review of the impact of external shocks on monetary policy effectiveness in non-WAEMU countries

84. Twinoburyo, E.N., Odhiambo, N.M., (2018), Monetary Policy and Economic Growth: A Review of International Literature, *Journal of Central Banking Theory and Practice*, 7(2), pp. 123–137.
85. Umar, G., Abdulhakeem, K., (2010), Oil price shocks and the Nigeria economy: a variance autoregressive (VAR) model, *International Journal of Business and Management*, 5(8), pp. 39-49.
86. UNCTAD, (2002), *The Least Developed Countries Report 2002*, U.N. Publications, https://unctad.org/system/files/official-document/lcd2002_en.pdf (Accessed: 22/07/2020).
87. Varangis, P., Varma, S., de Plaa, A., Nehru, V., (2004), Exogenous shocks in low-income countries: economic policy issues and the role of the international community, In: *Background Paper Prepared for the Report Managing the Debt Risk of Exogenous Shocks in Low-income Countries*, World Bank, Washington, DC.
88. Vegh, C.A., (2013), *Open economy macroeconomics in developing countries*, MIT Press.
89. Williams, N.E., Gray, C., (2020), Spatial and temporal dimensions of weather shocks and migration in Nepal, *Population and Environment*, 41, pp. 286–305.
90. Woodford, M., (2003), Optimal interest-rate smoothing, *The Review of Economic Studies*, 70(4), pp. 861–886.
91. Zouri, S., (2020), Business cycles, bilateral trade and financial integration: Evidence from Economic Community of West African States (ECOWAS), *International Economics*, 163 (October), pp. 25-43.