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INFLATION TARGETING UNDER WEAK MACROECONOMIC FUNDAMENTALS: DOES GHANA NEED A MONETARY POLICY RE-DIRECTION?

By

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SUMMARY

This paper explores the effect of inflation targeting on interest rates in Ghana. It argues that inflation targeting in the midst of fiscal indiscipline, persistent over expenditures and weak productive structures, as well as, low export capacity that expose the country to exchange rate fluctuations will not be effective and rather result in high interest rates. It further points out that with the country characterized by high fiscal dominance and volatile exchange rates coupled with, a very weak productive, institutional and operational capacity, unlike most inflation targeters across the globe, inflation targeting is perhaps not for a developing country like Ghana. Moreover, it observes that while the framework has been found to be associated with high macroeconomic performance, the over fixation on price stability without recourse to real economic outcomes such as growth and employment remains a major concern. Furthermore, the numerous target misses the central bank had experienced since its adoption, though does not weaken the effectiveness of the regime, could result in reputational and credibility damages for the bank which would be very costly to remedy. Our empirical analysis also suggests a weak monetary policy pass-through to the average lending rate as it indicates a downward rigidity when the policy rate is on the decline. The paper therefore concludes by making a case for a national debate around inflation targeting as a monetary policy framework after a decade of its adoption and suggests the need to either solidify the economic fundamentals for its success or explore an alternative monetary policy framework that will be in sync with the country's economic peculiarities.

IEA Ghana

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INTRODUCTION

Inflation targeting, which simply involves a central bank raising or lowering interest rates to anchor inflation expectations in order to achieve a given inflation target, has been recognized mostly in the developed world as a more effective way of maintaining low and stable inflation. The conventional wisdom is that raising interest rates usually cools the economy to rein in inflation. The issue is that there is no long-term trade-off between inflation and output and that price stability stimulates growth.

Since New Zealand paved the way in 1990, more than 30 developed and emerging nations have followed, and the number of inflation targeting central banks continues to grow with the US and India being the most recent to join the club of fully-fledged inflation targeters.

Ghana is among the emerging economies second to South Africa in sub-Sahara Africa to adopt inflation targeting. The functional autonomy of the Bank of Ghana (BoG) in adopting inflation targeting through the Monetary Policy Committee (MPC) to conduct monetary policy in a manner that ensures price stability, while supporting other macroeconomic goals is guaranteed under the Bank of Ghana Act, 2002 (Act 612) but it was not until 2007 that the Bank officially adopted an inflation targeting framework for the conduct of monetary policy. Prior to its adoption, the Bank of Ghana operated largely a direct controlled system of monetary framework, known as the monetary aggregate regime with money growth as the nominal anchor in arresting inflation.

However, a decade after the adoption of IT, Ghana's experience under the framework has sparked debate over its effectiveness in ensuring a low and stable price levels and in particular, lowering interest rates as it tends to over emphasize inflation at the expense of other monetary and macroeconomic goals, like growth and employment.

The large fiscal expansions coupled with unfavourable trade balances which often lead to high inflation pressures and weakening of the domestic currency, particularly in periods immediately after election years, had meant that the Bank of Ghana had had to adjust the monetary policy rate (MPR) upward in many occasions in order to subdue the resultant inflationary pressures without recourse to the negative effect on growth. This has culminated into high interest rates, which is among the highest in Africa.

For instance, the MPR had been increased from 13.5 percent in 2010 to 26 percent by the end of 2015 and stayed there until January 2017. Although inflation, since March 2016, had consistently been falling from a high of 19.2 percent to 13.3 percent in February, 2017, the MPR remained resolute at the 26 percent until it was marginally reduced to 25.5 percent in January and 23.5 in March 2017. This situation has created a wide spread between inflation and the MPR, as well as, between the average lending rate and inflation rate over a long period of time. The question on the minds of many economists and civil societies is why the monetary policy rate and lending rates have not fallen in like manner with inflation, even though inflation is on a persistent decline.

Inflation targeting as a monetary framework combined with salient characteristics of emerging economies especially Ghana raises important policy concerns. This is because several studies have shown that certain characteristics of emerging markets do not support inflation targeting framework.

Emerging market economies are often characterized by a lack of credibility and limited access to international markets, pronounced adverse effects of exchange rate volatility on trade, fiscal dominance, high liability dollarization, and higher pass-through from the exchange rate to inflation. These characteristics can be a threat to inflation targeting framework for developing economies like Ghana.

It is against this background that this paper explores explores the effect of inflation targeting on inflation and interest rates in Ghana. It argues that inflation targeting in the midst of fiscal indiscipline(persistent over-expenditures) and weak productive structures, as well as, low export capacity that exposes the country to exchange rate fluctuations will not be effective and rather result in high interest rates. It further points out that with the country characterized by high fiscal dominance and volatile exchange rates, coupled with a very weak productive, institutional and operational capacity, unlike most inflation targeters across the globe, inflation targeting is perhaps not for a developing country like Ghana.

The rest of the paper is structured as follows: Section 2 presents a conceptual framework of the effectiveness of inflation targeting. Section 3 discusses the impact of inflation targeting on inflation in Ghana, comparing pre and post inflation outturns. Section 4 presents the global context by comparing Ghana's macroeconomic fundamentals with countries under inflation targeting regime. Section 5 presents conclusion and policy recommendations.

CONCEPTUAL FRAMEWORK

Given the rising consensus among economists and policy makers that there is no long-term trade-off between inflation and output and that price stability is consistence with high economic growth, many central bankers have adopted a framework for monetary policy known as Inflation Targeting. Although all inflation targeters have customized their approach distinctively, certain general empirical generalizations and preconditions for success (as shown in the Box1 below) can be made.

Box 1: Pre-Conditions for Effective Inflation Targeting Framework	
Institutional independence	The central bank must have full legal autonomy, and be free from fiscal and/or political pressures that could create conflicts with the inflation objective.
Well-developed analytical capabilities and infrastructure.	Data requirements for inflation targeting are more demanding than for alternative regimes and the monetary authorities must have a well-developed capacity to forecast inflation.
Economic structure.	Inflation targeting requires that prices are fully deregulated, that the economy is not be overly sensitive to commodity prices and exchange rates, and that dollarization is minimal.
A healthy financial system.	In order to minimize potential conflicts with financial stabilization objectives, and guarantee effective monetary policy transmission, the banking system should be sound, and capital markets well-developed.

The foremost hallmark of any inflation targeting framework is that the central bank is given an institutional independence and a clear mandate to pursue price stability. In that pursuit, the central bank, (or the fiscal authority, or some combination of both) announces an explicit inflation target (either as a point, a band or a ceiling) for a period; intermittent assessment of inflationary pressures over the relevant time horizon; and systematic adjustments in the monetary policy tool based on pressure within the operating environment.

As inflation targeting is forward-looking, a prerequisite that underpins its success, is a well-functioning inflation forecasting framework and an efficient financial market that is responsive. As established in practice thus far, inflation targeting central banks maintain significant scope for applying discretion in the conduct of monetary policy. Thus, a good judgment on their part is a critical element for successful inflation targeting.

Achieving the target was crucial to realizing policy credibility and anchoring expectations of economic agents about monetary policy. Truly, having an autonomous central bank with an overt mandate and quantifiable inflation target is desirous, but it has else diminished the crux of using monetary policy to achieve other essential economic goal. The centrality of the central bank on aggressive inflation targeting is counterproductive in a country characterized with weak fiscal and productive fundamentals.

Several empirical studies into the effectiveness of IT in reducing inflation have been undertaken. Two main contrasting conclusion are drawn from available empirical literature: while some economists agree inflation targeting effects no statistical difference on inflation (Huh, 1996; Bernanke and Mihov, 1998; Lane and van den Heuvel, 1998; Bernanke *et al*., 1999; Honda, 2000; da Silva and Portugal, 2000; Ball and Sherridan, 2003) others provide evidence that the framework does cause structural break in the inflation rate trend (Almeida and Goodhart, 1996; Batini and Laxton, 1994; Fillion and Le´onard, 1997; Choiet al., 2003; Pe´tursson, 2004; Mishkin, 2007). Mishkin (2007, p. 406) asserted that IT has firmly anchored inflation expectations and inflation beyond the counterfactual (what would be the case under no IT). His assertion supported that of Condon (2006) in the case of Korea.

Bernanke *et al.,* (1999) while favoring inflation targeting, highlighted extensive evidence that the framework's success traded-off national output (i.e. sacrifice ratio) compared to non-targeters. The question of whether IT will succeed in developing nations was addressed by Mishkin and Savastano (2002) who reported that IT will only be successful (and not sacrifice economic growth) if and only if standard initial conditions of central bank operational independence, absence of fiscal and financial dominance, and moderately low inflation are in place. This position was further reinforced by Stiglitz (2008). Stiglitz debased inflation targeting as a crude recipe for developing nations as long as they do not integrate themselves of the international shocks by restructuring their economic fundamentals.

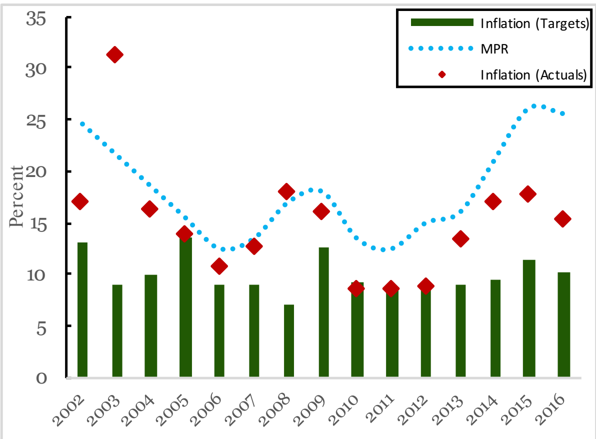
According to Mishkin (2010), an important criticism of inflation targeting is that a sole focus on inflation may lead to monetary policy that is too tight when inflation is above target and thus may lead to output fluctuations, lower economic growth and high unemployment.

PRE AND POST-INFLATION TARGETING ADOPTION ANALYSIS

Like most performance measurement criteria, the success of any IT regime is evaluated by comparing inflation targets with outcomes. By this, I intend to examine the magnitude of spread between targets and recorded inflations rates compared to periods preceding inflation targeting. In figure 1.1 below presents a time series plot of targeted inflation rates and the end year outturns.

Although, inflation has been relatively stable after the adoption of inflation targeting in Ghana, the country has not been able to achieve its target of 8% with +/- 2% deviation. Figure 1.1 shows the trend of inflation and its gap from target rate from 2002 to 2016 (inflation targeting periods). As previously mentioned, 2007 is the year the BoG formally adopted the inflation targeting framework and so years prior to this year is considered as pre-IT era and years starting from 2007 are post-IT era.

Figure 1: Ghana: Inflation Targets versus Actuals. 2002-2003



Sources: Author's with data from the Bank of Ghana and Ghana Statistical Service

With the exception of 2003 where pre-IT inflation recorded end of year headline inflation of 31.3 percent with the worst deviation from target of 22.3 percent in recent past, the average deviation between 2000 and 2006 is 3.18 percent (including 2003 is 7.0%).

While post-IT inflation has generally been low, the average deviation from the target is not too significantly different from the pre-IT era. The average deviation from the target between 2007 and 2016 is about 4.11 percent. Although this is lower than the pre-IT average of 7 percent, when 2003 outturn is taken out the equation, the difference is just about one percentage point.

Figure 1 further shows that the BOG, since 2007 (i.e., about 10 year-period), has missed its target more than two-third (7 out of 10) of the time. This is in contrast with other inflation targeters across the globe. While inflation targeters in developing countries have typically missed their targets about ½ the time, those in industrial countries have missed their targets just about ⅓ of the time. The situation in Ghana to weaken monetary policy effectiveness as it carries severe credibility and reputational costs that could land the central bank in the time inconsistency problem with the attendant risks of further target misses1.

DOES GHANA'S ECONOMIC FUNDAMENTAL SUPPORT IT?

In the following analysis, we use simple statistical tools to compare Ghana's macroeconomic fundamentals with other countries under inflation targeting and examine their respective key macroeconomic performance. The summary of the findings suggests that although several studies have found that inflation targeters do experience significant improvements in macroeconomic performance relative to their own previous performance, Ghana's experience thus far is far from impressive, particularly among its

1 The time inconsistency problem of monetary policy occurs if policymakers use discretionary policy without committing to a behavioral rule, there is a higher probability that actual inflation will be higher than targeted, leading private agents loose trust in the CB and often setting higher inflation expectations (Mishkin 2010).

comparators under inflation targeting.

Ghana has the highest level of inflation and Monetary Policy Rate among countries under inflation targeting.

Ghana's macroeconomic conditions of weak production and export capacities that translate to high and consistent trade and current account deficits, fiscal indiscipline culminating in intolerable fiscal deficits, high exchange rate volatility with high vulnerability to external shocks, unsustainable debt to gross domestic product (GDP) levels, *inter alia* appear to suggest that perhaps the fundamentals are not ripe for inflation targeting. The conventional notion is to raise the monetary policy rate (MPR) when there is an upward inflationary pressure.

Clearly, in the case of Ghana, the nation's weak fundamentals have almost always posed a threat to inflation targeting thereby pushing the Bank of Ghana to correspondingly adjust MPR upward. Since the MPR is a symptomatic benchmark rate for other market rates, its rise further degrades the already fragile fundamentals.

Compared to other inflation-targeters, Ghana's preconditions or fundamentals are almost incompatible with the IT framework. See table 1 below. Ghana has ranked worst in most of the indicators. For the period under review 2007-2016), Ghana's MPR is the highest among all inflation targeters, averaging 17.2 percent. Uganda is next with MPR of 14.4 percent while the best two performers, Japan and US recorded 0.38 percent and 0.82% respectively over same time period. The nation's inflation performance repeated yet the worst performance.

Table 1: Average Indices of Inflation Targeters, 2007-16[2]

	MPR	INF	LR[1]	TRADE BAL.	FISCAL DEFICIT
Ghana	17.20	13.67	29.59	(14.25)	(6.37)
Uganda	14.35	6.36	22.00	(11.66)	(2.49)
Brazil	11.19	6.16	41.16	0.28	(4.45)
Mexico	9.62	3.95	15.64	(1.45)	(2.88)
South Africa	8.40	6.13	16.27	(0.22)	(2.47)
Turkey	8.24	8.13	17.47	(3.87)	(3.36)
Armenia	7.39	5.29	17.49	(19.54)	(3.22)
Indonesia	7.08	5.86	12.82	2.74	(1.23)
India	7.01	8.39	10.97	(3.61)	(7.84)
Serbia	7.01	5.52	10.51	(17.57)	(2.97)
Georgia	6.38	1.97	14.93	(19.17)	1.22
Poland	5.85	2.03	11.46	(1.37)	(4.29)
Iceland	5.81	5.38	11.43	0.02	(1.27)
Colombia	5.58	4.31	12.67	(3.15)	(1.80)
Hungary	5.40	3.45	7.10	2.35	(4.79)
Guatemala	4.86	4.89	13.40	(12.80)	(1.99)

2 Countries arranged in a descending order of magnitude.

Korea	4.58	2.33	5.42	2.93	1.08
	MPR	INF	LR[2]	TRADE BAL.	FISCAL DEFICIT
Peru	4.44	3.18	6.85	2.82	0.06
Albania	4.15	2.56	11.28	(22.46)	(4.21)
Chile	4.06	3.72	8.22	4.40	(3.39)
Norway	3.98	2.10	19.13	12.55	11.15
Australia	3.81	2.54	6.82	(1.19)	(1.48)
Moldova	3.70	6.04	5.59	(38.73)	(1.50)
Philippines	3.46	3.95	7.84	(4.01)	(1.16)
Romania	2.78	4.22	5.18	(6.89)	(3.10)
New Zealand	2.41	2.06	5.82	0.94	0.05
Thailand	2.35	2.24	6.66	4.83	(0.30)
Israel	1.74	1.71	4.94	0.66	(3.99)
Sweden	1.65	1.09	4.25	5.91	(0.03)
Canada	1.46	1.65	3.33	0.83	(1.06)
United Kingdom	1.42	2.35	1.49	(2.42)	(5.02)
Czech Republic	1.02	1.97	5.31	2.99	(3.02)
United States	0.82	1.78	3.94	(4.03)	(5.55)
Japan	0.38	0.28	1.47	0.37	(6.44)

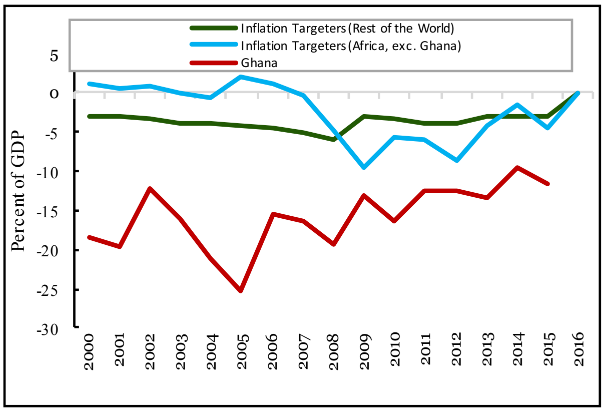
Sources: IMF, World Bank, OECD, BoG, MoF

Ghana's trade and current account balances are among the worst in countries under inflation targeting

In either cases of trade or the broad current account balances as depicted in figures 2a and 2b respectively, Ghana has witnessed a rather dull record compared to other IT targeters in Africa and the rest of the world. A consistent trade deficit between 2000 and 2016 signals a heavy toll on the cedi as from lower reserve accumulation over the 16 or so years. This downside proves a macroeconomic weakness that affects the success of the IT framework. In 2003 however, an increased flow of transfers (HIPC grant) to the country saw an improved current account balance with a slight surplus. Around this same year, the trade deficit kept on drifting downwards with the pass-through effect on currency depreciation and the resultant effect on the country's headline inflation.

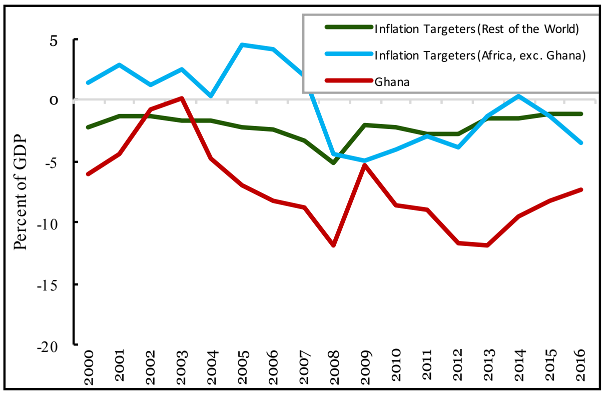
Another important factor that impacted on the country's receipts from trade over the period is commodity price volatility on the world market. Ghana is almost incapable of insulating itself from commodity price shocks. Whereas the price of cocoa suffers a consistent decline in the world market, that of Brent crude oil and gold are inconsistent and erratic, mostly to the disadvantage of Ghana.

Figure 2. Balance of Trade Spread among Inflation Targeters



Source: World Bank, WDI

Figure 3. Current Account Balance among Inflation Targeters



Source: IMF, WEO Database

The 2007-2008 world financial turmoil caused a downslide in most economic indicators across the world. Ghana's Trade exports saw a heavy hit with a fall in international demand for cocoa and other merchandise exports. Financial flows, as with remittances, also recorded slight declines around the crises, aggregating into adverse terms of trade movements. Following the trends in Figure 2b, Ghana's experience relative to the rest of inflation targeters has been worse.

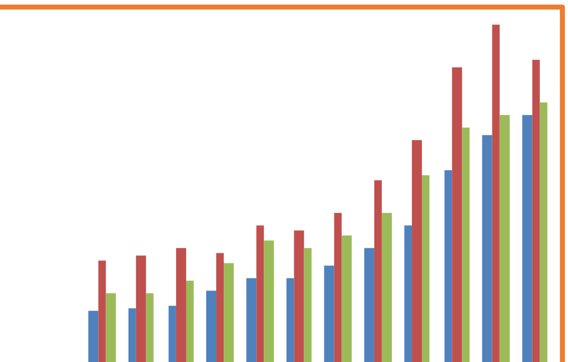
Many developed countries that relish a rather good position in terms of trade have achieved successes with the IT framework. Same cannot be said in the case of Ghana as the trickle-down effect of a weak trade position is seen in a worsening and volatile currency and heightened inflationary pressures which IT has not arrested.

The Ghana Cedi has fluctuated most, compared to currencies of other inflation targeting nations.

Ghana's consistency in running current account deficits has contributed significantly to the fall in the value of the Cedi3. The Ghana Cedi has suffered rapid depreciation against major convertible trading currencies under a flexible market regime. The interplay of excess-demand and deficit-supply forces on the forex market has seen for the most part of the last decade, massive depreciation of the Cedi, particularly against the US Dollar and UK pound.

This is largely because Ghana is an import-dependent economy and exporter of primary commodities which prices fluctuate so widely in international markets. However, efforts to diversify and strengthen exports beyond commodities have not achieved the desired results.

Figure 4: Exchange Rate: Cedi against major currencies (2003-2016)



	2003	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
GH¢/US$	0.9223	0.937	0.9893	1.2457	1.4624	1.4689	1.6596	1.9628	2.3457	3.2418	3.8645	4.2
GH¢/GBP	1.7365	1.8098	1.963	1.8655	2.3305	2.2683	2.5473	3.106	3.7641	4.985	5.7015	5.12
GH¢/Euro	1.2145	1.217	1.4164	1.6887	2.081	1.955	2.1591	2.555	3.1664	3.9682	4.1815	4.38

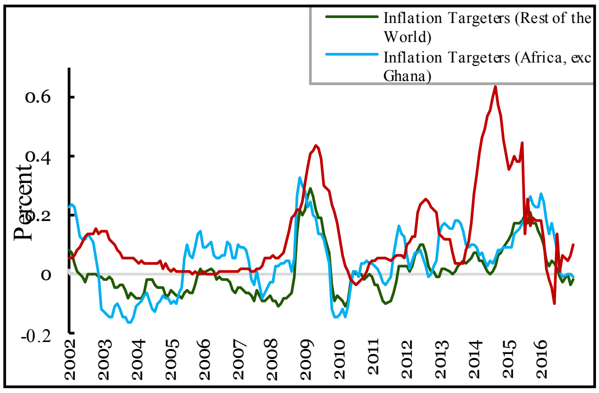
Source: Data from the Bank of Ghana

3 Anning Lucy, R. J. (2015). Exchange rate and Trade balance in Ghana-Testing the validity of the Marshall Lerner Condition. European Centre for Research Training and Development UK.

The supply of US dollar depends largely on exports and capital inflows. However, our capacity to earn sufficient dollars through exports has been hampered by weak productive structures and fluctuations in commodity prices of the few we export4.

From Figure 4 above, the Ghana Cedi has fluctuated most, compared to currencies of other inflation targeting nations. Notable is the fact that much of the variations were witnessed under the current IT framework.

Figure 5: Currency Depreciation Spread among Inflation Targeters



Source: IMF, IFS Database

The high pass through effect of exchange rate to inflation in Ghana makes the IT framework vulnerable to external shocks

The fact is that Cedi depreciation makes imports relatively expensive on the domestic market and exports cheaper and competitive on the international front. The rather unfortunate household's inordinate taste for foreign goods raises inflationary pressures because of rising import prices. High demand for exports only works threatens inflation via the aggregate demand. Yet, structural rigidities in the economy stifle the nation's capacity to take advantage of the increased demand to shore up the cedi before that benefit erodes. Unfortunately, we dump our market with all sort of consumable import commodities. Again, since these imports constitute a significant proportion of our CPI basket, inflation is likely to increase when not adequately mitigated. Imported inflation has always posed upward risks to inflation. The BoG in an attempt to subdue such pressures raises MPR to dampen demand. But how effectively has the persistent monetary contraction held inflation low in Ghana?

According to recent reports, excessive exchange rate fluctuations pose a significant challenge to the implementation of inflation targeting. This can potentially amplify the importance of exchange rate changes relative to domestic interest rate movements in policy transmission. In such circumstances, the literature suggests the central bank will typically pay greater attention to balance sheet effects of exchange rate movements on the economic outlook and place greater weight on a relatively smooth evolution of the exchange rate than otherwise. This then raises questions about the appropriate response, including the role of foreign exchange intervention.

While some countries have tried to combine inflation targeting with exchange rate bands, in virtually all such countries, including Chile, Israel, Poland, and Hungary, conflicts between achievement of the inflation target and the exchange rate target have eventually arisen, and normally causing further distortions and uncertainties.

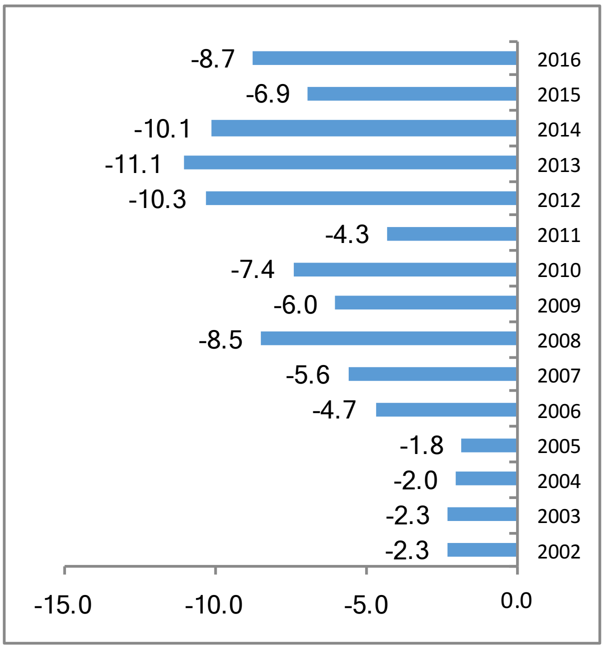
Besides, in a situation where there is a high pass-through effect of the exchange rate to inflation, like in Ghana's case the central bank is likely to lose control over appropriate policy responses solely aimed at achieving the inflation target.

4 Uwe Böwer, A. G. (2007). Commodity Price Fluctuations and their Impact on Monetary and Fiscal Policies in Western and Central Africa. European Central Bank

Compared to its peers, Ghana has recorded the worst budget deficits over the time horizon, with the largest spreads occurring under an IT regime.

It is well acknowledged that the credibility of any systematic monetary policy framework requires bringing public sector finances under control. However, in Ghana it is rather the opposite, and fiscal sustainability has remained largely elusive since the start of the IT framework.

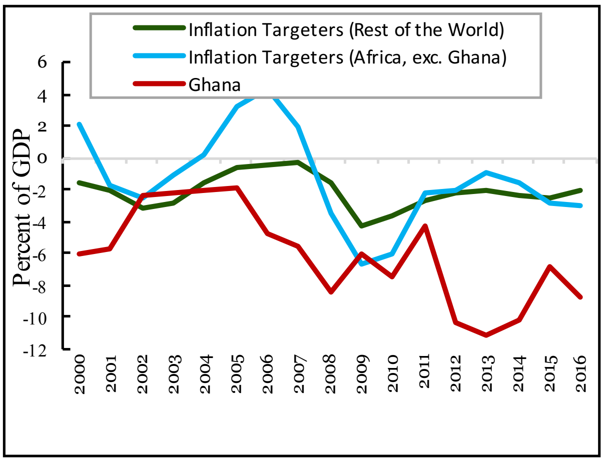
Figure 6: Fiscal Performance, 2002-2016



Source: Ministry of finance

Even though the long-term impact of fiscal deficits on an economy is intensely debated, some immediate consequences of this phenomenon is unchallenged; inflation being one of them. Ghana has since battled with a cyclical high fiscal deficits syndrome, a negative imbalance between revenue and expenditure accruing within a fiscal year. Reducing fiscal deficit is as much a structural phenomenon as it is political. Cutting deficit means downsizing government spending and/or raising taxes, both of which are not populist. Characterized with inefficient tax administration systems, Ghana has struggled to meet its revenue targets over the past decade and beyond. In 2016, government tax revenue was only one-fifth of GDP. Ghana's high fiscal deficit position over the years is a double-sided problem-revenue shortfall and expenditure overrun.

Figure 7: Fiscal Deficit among Inflation Targeters, 2000-2016



Source: Data from IMF, WEO Database, Ministry of Finance, Ghana

Consistent underperformance of revenue caused by leakages, loopholes, unwarranted exemption and unchecked evasions in Ghana's tax regime remain a challenge. The positions are further exacerbated by accumulated arrears and expenditure overruns owing to fiscal indiscipline. The result is the debilitating deficits as shown in figure 6 above. The graph presents a pictorial view of the spread among the deficit recorded by other inflation targeters and Ghana. Compared to its peers, Ghana has recorded the worst deficits over the time horizon, with the largest spreads occurring under an IT regime.

The unending deficits phenomenon has dire ramifications on inflation instantaneously. Excesses in government expenditure increase the liquidity in the economy. The resultant growth in money supply is often unmatched with a corresponding growth in production thereby pushing domestic prices up. As asserted by Milton Friedman, "***inflation is always and everywhere a monetary phenomenon".*** The case in Ghana has not been any different as periods accompanying high fiscal deficit has witnessed upward inflationary pressures and actual hike in the general price levels of consumption good and services. Correlation analysis on fiscal deficit and inflation estimated a coefficient of 0.37. Thus there is a significantly positive relationship between both variables. The graph of inflation is almost a mirrored image of fiscal deficit; depicting their true relationship.

Another important consideration is the issue of public debt, birthed from fiscal deficits. Yes, government is now in debt and must find "ways and means" to finance the deficit. Two conventional approaches deployed in Ghana to this end are, raising of bonds on the capital market and printing of new money (central bank financing). Whiles the former has culminated in the unsuitably debt overhangs, central bank financing is directly inflationary. The initial growth in money supply occasioned by excessive budget deficit, that brought the need to finance the shortfall through seignorage, has in turn led to an endogenous money growth; both of which are inflationary.

According to an IMF (2016) review report on Ghana, while the amended BoG Act introduced some improvements to central bank governance and financial autonomy for appointment and dismissal of Board members, a key amendment that proposed to reduce central bank financing of government to zero did not muster sufficient parliamentary support. Instead, BoG financing of government of up to 5 percent of the previous year's revenues is still possible under the amended Act, which weakens the credibility of the inflation targeting framework (IMF, 2016).

For what concerns Ghana in the possibilities of inflationary monetary financing and an otherwise (non-inflationary) bond financing is the issues of private sector crowding-out and its accompanying diminishing effects on production and growth. What is clear however, is that government has pursued domestic borrowings aggressively. In effect, investable capital for a private sector-led growth has been severely constrained. Total debt-GDP, as at the end of 2016 fiscal year, has exceeded the sustainability threshold to over 72%, of which domestic borrowing is near half. Public debt rates have plummeted consistently until under inflation targeting as monetary financing is considered a threat to inflation targets. The reverse trend is elicited by the strong appetite for bonds at high rates, at the expense of growth. Correlational analysis on the relationship between fiscal deficit and inflation revealed.

Therefore, while the proximate source of high inflation is always monetary as inflation is directly associated with money growth, the true structural cause of persistent high inflationary pressures in Ghana is high and recurring fiscal deficit that is not arrested by austerity measures in the form of suppressed spending and/or hikes in (non-seignorage) taxes while broadening the tax base. Clearly, Ghana's fiscal dominance and inflation targeting is a merry-go-round phenomenon, with the former always posing heightened risks to inflation.

Ghana's Interest Rates (MPR and Lending Rate) are the highest among the Club of Inflation Targeters

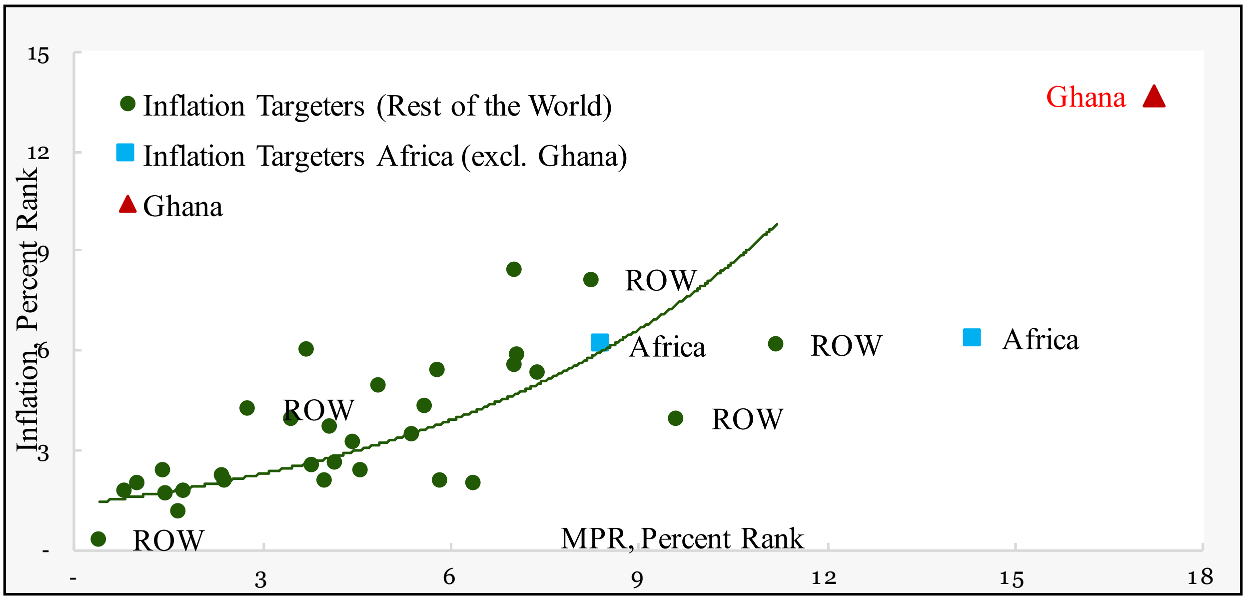
The cumulative effect of high inflation, rapid depreciation of the cedi and fiscal expansion that had led to increased domestic borrowing by government led to high interest rates, among the highest in Africa.

For example, Figure 7 indicates that the monetary policy rate (MPR) increased from 13.5% in 2010 to 26 percent by the end of 2015 and stayed there until November 2016 when it was reduced slightly to 25.5 percent. This situation has kept lending rates so high with the average base rate hovering around 26 percent over the last five years. The knock-on effect is that businesses are faced with severe financial constraints that tend to stifle their ability to expand and provide employment.

The foregone analysis exposed the fundamental flaws that Ghana's inflation targeting is built on.

A persistent tight monetary policy transmits into a relatively higher monetary policy rate. A monetary expansion, on the other hand, lowers policy rate. A higher MPR is intended to sink money supply to contain inflationary pressures. The rationale is that the Banks sets a higher MPR to dampen general demand to rein in inflation at sustainably low rates.

Figure 8: Inflation Targeters: Average Monetary Policy and Inflation Rates, 2007-16



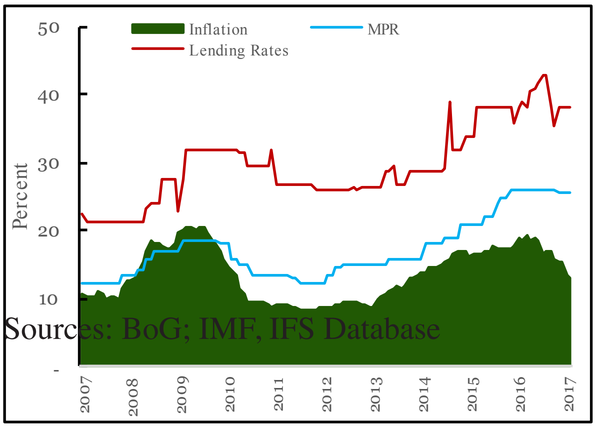
Sources: IMF, IFS Database; OECD Data; Country-Specific Central Bank Websites

Since the MPR dictates other market rates, particularly commercial banks' lending rates, it is best for the economy to have low and stable inflation while holding MPR at lower rates than to have a high MPR and high inflation or any other combination. Thus, as in figure 8 above, the further away a point is from the origin (0,0) the less effective is inflation targeting. The reverse is true for points closer to the origin. Clearly, the most industrialized and developed nations that are not bedeviled with fiscal dominance and high exchange rate volatility have their MPR-Inflation Points closer to the Origin. It is no surprise that Ghana, with such weak fundamentals, is an outlier in the club of inflation targeters with an annualized average MPR and inflation rate of 17.2% and 13.67% respectively. South Africa and Uganda, both sub-Saharan Africa inflation targeters have inflation rate below 7 percentage points while holding MPR at 8.4% and 13.4% respectively over the period. Indeed, if monetary contraction leads to low inflation why Ghana has performed so poorly in the club of inflation targeters?

Lending rates in Ghana is suffering a heavy downward inertia as it hardly moves to reflect downward movements of the MPR. Lending rates are more responsive to upward adjustments than downward adjustments of the MPR. This has resulted in outrageous lending rates to the public, reported to be one of the highest globally.

The fact is, currently, the general direction of funding cost is downwards. Government borrowing using treasury bills and notes has dropped significantly by 30.57% since fourth quarter of 2016. Over the same period, headline inflation has also plummeted drastically by nearly 25 percent to 13.2 percent. A 1-year notes has remained at 19% for over two months. The Non-Performing Loans (NPLs) portfolio of banks has improved to 17 percent, arising from the restructuring and amortization of energy sector debts, and expected to drop further. On the flipside, marginal borrowing via the interbank market by commercial banks, to ensure they do not flout the BoG regulation on Asset/Liability Operations, has hovered around 25 percent for more than a year. As at February, 2017, base rates have averaged over 26 percent. Average lending rates, which reflect the true cost of borrowing has averaged 33.8% as at the end of February, 2017. Some banks charge as high as 43.6 percent. Figure 1.6 below depicts the wide spread among inflation, MPR and lending rates in Ghana under an uncompromising inflation targeting framework.

Figure 10: Key Macroeconomic Indicators, 2007-16



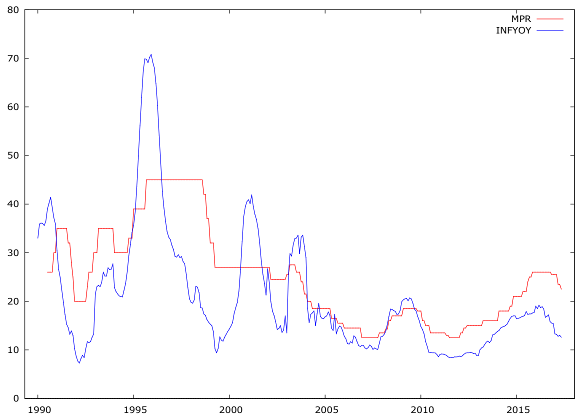
Sources: BoG; IMF, IFS Database

Ghana's policy rate is stoking cost of borrowing and forcing businesses to go bankrupt. High interest rates have been consistently ranked by the Association of Ghana Industries as a major stifling factor in doing business in Ghana. The effect is that access to capital by the private sector has been constrained largely by the unsustainable high rates on credit advances as well as government's persistent and competitive demand for loanable funds. The resultant effect is the low levels of growth in domestic output as huge investable capital is loaned to central government to finance deficits. Even the few loans to the public are at unsustainable rates.

EMPIRICAL RELATIONSHIP AMONG POLICY RATE, INTEREST RATES AND INFLATION NEXUS

As espoused in the previous section, the theory underpinning inflation targeting after accurately forecasting for inflation, requires monetary authorities to change policy rate to achieve the desired policy outcome. The connectivity is explained as a change in policy rate should affect retail interest rate (intermediate target) and consequently inflation (final target). Data on selected interest rates, policy rate and inflation from Bank of Ghana suggest that monetary policy has some influence on these variables in the economy. Figures (12,13 & 14???) depicts the graph of policy rate with lending rate, interbank rate, treasury bill rate and inflation. A pictorial inspection of the graph(s) suggest(s) that policy rate guides the path of lending rate, interbank rate, Treasury bill rate and inflation. The figure shows that these variables move in tandem signaling a correlation.

Figure 11: Graph of Policy Rate and Interbank Rate



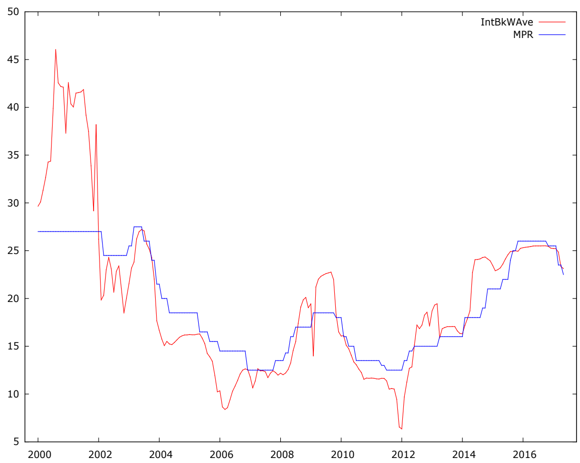
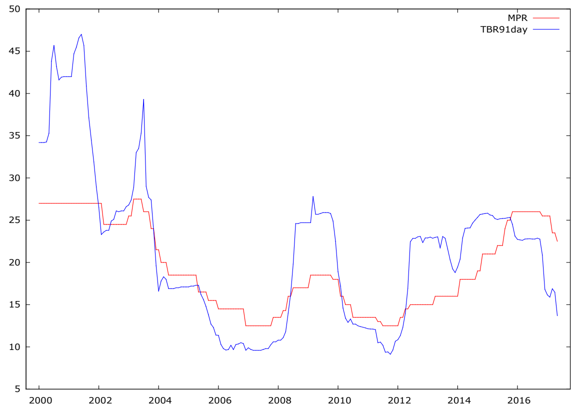
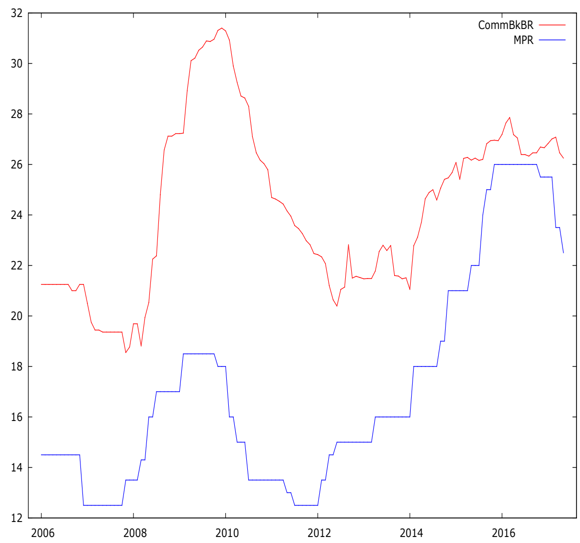


Figure 12: Graph of Policy Rate and Treasury Bill Rate



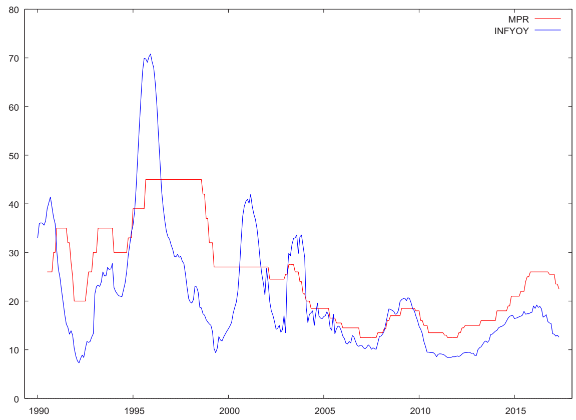
Source: Data from the Bank of Ghana, 2017

Figure 13: Graph of Policy Rate and Lending Rate



Source: Data from the Bank of Ghana, 2017

Figure 14: Graph of Policy Rate and Inflation Rate



Source: Data from the Bank of Ghana, 2017

An exploratory analysis between policy rate, interest rates, and inflation further suggest that policy rate is positively correlated with them. Table 2 presents the covariance analysis. The results from the covariance analysis suggest that the correlation between policy rate and interbank rate, Treasury bill rate, lending rate and inflation are given respectively as 0.86, 0.79, 0.56 and 0.67. The results further reveal that the correlations are statistically significant, indicating that monetary actions influence interest rates and inflation.

However, decomposing policy rate change into positive and negative change representing increase and decrease in policy rate respectively, it is observed that the rate of a positive change is greater than a negative change. Also, the correlation results give mixed evidence on the effect of policy rate on the interest rates. The result indicates that correlation with a positive change is statistically significant while that of a negative change is insignificant. This shows that policy rate mainly contributes to an increase in interest rate but weak in its contribution when there is a decrease. This suggests that interest rates are rigid downwards and that a reduction in monetary policy alone cannot bring the high lending rates down, though greatly explains the rapid rise in the lending rates.

Table 2: Correlation Analysis

Policy Rate		Lending Rate	TBill Rate	Int.Bank rate	Inflation
Default	Correlation	0.56	0.79	0.86	0.67
	P=value	0.000***	0.000 ***	0.000***	0.000***
Negative Change	Correlation	-0.16	-0.33	-0.43	0.13
	P-value	0.8953	0.000***	0.000***	0.4736
Positive Change	Correlation	0.46	0.60	0.8316	0.4180
	P-value	0.0003***	0.000***	0.000***	0.000***

Source: Author's estimation

The revelation from the above analysis suggests the following:

Monetary actions contribute more to increase than a fall in interest rates. That is, in responding to inflation pressures, monetary expansion results in high interest rate. However, a counter monetary contraction to ease inflation does not result in a fall in interest rate. This asymmetric response of interest rate to policy rate change keeps interest rate high. It can thus be inferred that due to the asymmetric responds of interest rate to policy rate, the practice of inflation targeting creates upwards pressure on interest rates. As a result, if inflation remains the sole goal of the central bank then inflation targeting remains a better tool of monetary policy. However, if monetary authorities aimed at controlling the high interest rates that have bedeviled the economy, then inflation targeting can be counterproductive as per the analysis thus far.

Also, the weak correlation and asymmetry evidence identified from the above analysis, coupled with empirical studies such as Abradu-Otoo *et.al.,* (2003), Kovenan (2011) and Ayisi and Antwi-Asare (2013), which have found weak monetary pass-through in Ghana raises concern about the effectiveness of inflation targeting framework. This is because, effective monetary policy depends magnificently on smooth pass-through. In view of this, there is the need for more efficient way of conducting monetary policy that will enhance the pass-through or adopt policy framework that can circumvent the weak intermediate channel. Unconventional monetary approaches can be adopted as alternative in this regard.

CONCLUDING REMARKS

Getting monetary policy right is crucial to the health of the economy and the wellbeing of its people. As such, monetary policy should not only seek to achieve stable prices, but also seek to affect real economic outcomes such as growth and employment in order to improve the welfare of its citizens.

This paper has explored the effect of inflation targeting on interest rates in Ghana. It argues that inflation targeting in the midst of fiscal indiscipline/persistent over expenditures and weak productive structures, as well as, low export capacity that exposes the country to exchange rate fluctuations will not be effective and rather result in high interest rates. It further points out that with the country characterized by high fiscal dominance and volatile exchange rates, coupled with an institutionally and operationally weak productive capacity, unlike most inflation targeters across the globe, inflation targeting is perhaps not for a developing country like Ghana. It observes that besides the inflation target framework resulting in high interest rates in the country, the numerous target misses it had experienced since its adoption could result in reputational and credibility damages for the central bank which would be very costly to remedy.

The Bank's over fixation on inflation targeting to the neglect of other essential macroeconomic indicators and economic growth remains a concern. It should be noted that the conduct of monetary policy in Ghana must not only be directed at accommodating fiscal slippages and exchange rate volatility that pose inflationary threats. Given the current monetary policy sphere where the central bank's preoccupation is to manage inflation expectations without undertaking real monetary policy actions or balance of risk to growth. Both theory and evidence indicate that in an economy like that of Ghana monetary policy can affect not just prices but also output, employment and other important aspects of non-financial economic activity.

POLICY IMPLICATIONS AND RECOMMENDATIONS

The not too successful implementation of inflation targeting largely due to the weak macroeconomic fundamental and low production capacity must engender a national debate around inflation targeting as a monetary policy framework after a decade of its adoption. Although this paper is not against the adoption of inflation targeting as a monetary policy tool, it is trying to make a point that further interventions seem necessary to augment the existing policy structures since transmission process is dominated by long lags, operational inefficiencies, weak productive structures typical of developing countries.

The point is, if the country's ultimate goal of monetary policy is price stability through the use of inflation targeting, then there is the need to solidify the economic fundamentals and ensure that the country strive to meet the pre-requisites/conditions for a successful inflation targeting framework. In that regard, the following policy recommendations are suggested:

- Strengthen institutional and operational capacity of the central bank, particularly the BoG must have a well-developed capacity and infrastructure to forecast inflation and be able to determine the appropriate source.

- Measures should be put in place to accelerate structural economic transformation that will enhance the productive and export capacity of the economy in order to reduce the economy's over sensitivity to commodity prices and exchange rates volatility.

- The central bank must not only have the full legal institutional independence, but also operational autonomy that makes it free from fiscal and/or political pressures that could create conflicts with the inflation objective.

- Another factor that also appears to explain the downward rigidity in lending rate is the formula the Bank of Ghana introduced in March 2013 for the calculation of commercial banks base rate. The formula is based on four bank-specific variables namely: cost of funds, return on equity, provision for bad debt and risk premium. The Bank of Ghana further directed that banks are required not to lend below the advertised base rates. This formula, therefore, highly explains the downward rigidity in interest rates and weakens the potential of the MPR to drive down interest rates. It also does not allow market conditions or competition to drive down prices which is in contrast with an IT regime. Although the central bank recently announced introducing a new base rate calculation formula, we think that competition and market condition should be made to determine interest rates to make the MPR more effective in influencing interest rates.

Alternatively, in a situation where some of the pre-conditions are severely lacking and the country continues to have a very weak production base, and overreliance on commodity exports, as well as, high fiscal dominance, the literature suggests an alternative monetary policy framework. For instance, an IMF paper points out that despite the flexibility of the IT framework, there are countries where institutional and operational capacity and structural characteristics are likely to make inflation targeting unsuitable as a monetary policy framework.

Therefore, given that the current economic fundamentals, institutional and operational capacity of the country remain weak and structural transformation of the economy has been slow, we recommend that an alternative framework that is in sync with our development characteristics and peculiarities can perhaps be considered. For example, given the country's over exposure to exchange rate fluctuations, slow growth and fiscal dominance in recent times, as well as the rigidities that are embedded in base rate calculation, the central bank could be given an explicit dual mandate role. This is where the ultimate goal of the BOG is to achieve both maximum sustainable employment through enhanced growth and stable prices.

Alternatively, the explicit dual mandate of the monetary policy framework can combine price stability and a managed floating exchange rate with a target band as its overarching goal. For example, several countries, including Chile, Hungary, Israel, and Poland, combined inflation and exchange rate targets, while USA, Sweden and Norway target both price and employment rate. The rationale for a dual mandate is that monetary policy should not only seek to achieve stable prices, but also seek to influence real economic outcomes such as growth and employment in order to improve the welfare of its citizens.

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