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Central bank deficit financing in a constrained fiscal space

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Abstract
This policy note addresses central bank financing of fiscal deficits in Ghana and the macroeconomic implications thereof. Alternative configurations of deficit financing and the experiences of developing countries with a history of zero tolerance for central bank financing are addressed. Briefly, the note argues that sound public finances are predicated on sound rules on public spending. While central bank financing may be inevitable in environments with less tax revenues and undeveloped financial systems, borrowing from the central bank should be limited to only the state, and on transitory basis. Where such borrowing is undertaken, the loans should be repaid within the same fiscal year, and gradually, the government should wean itself off central bank financing of deficits. While the optimal central bank financing that is consistent with growth and stability is an empirical matter, a *dejure* rule may be useful when it is binding, and the operational autonomy of the central bank preserved.

Keywords: Deficit financing; Fiscal rules; Central banks; Government debt; Ghana
JEL Classification: E51, E52, E58

1. Introduction

In April 2015 Ghana signed up to a three year IMF Extended Credit Facility (ECF) of US$918 million to support medium-term economic stabilisation. The antecedents to this lie in the weak economic growth occasioned by large fiscal deficits, mounting government debt and a rapidly depreciating currency. The initial disbursement of US$114.8 million sought to restore debt sustainability and macroeconomic stability to foster a return to high growth and job creation, without compromising social spending. As with most international lending, however, this bailout package has strings atached. Central bank credit to government which has been a major source of financing the deficit was curbed at 5% of previous year's tax revenue for 2015 and 0% for 2016 and 2017. In the light of the limited fiscal space facing policy makers, the experience of other developing countries may help shed light on the important policy options. At the same time, an understanding of the optimal deficit consistent with Ghana’s economic growth experience may be useful to guide future policy. This study

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therefore aims to examine central bank financing of fiscal deficits; the conditions that determines the optimal level of central bank credit and the macroeconomic implications of alternative configurations of central bank financing. Two contrasting lessons in fiscal prudence and fiscal profligacy are drawn from Chile and Brazil respectively.

2. Central bank financing of budget deficits: a brief scan

Central bank financing of fiscal deficits is not a new phenomenon in both developing and advanced economies, however, it has assumed importance particularly in the aftermath of the recent global financial crisis. This is more pronounced on the back of increasing government debts and reduced tax revenues. Generally, financing budget deficit can take a number of forms: reduction in expenditures, increasing fiscal revenues, printing money or by borrowing from domestic and external sources. Each of these mechanisms carry different trade offs that policy makers have to always bear in mind. In some countries, there are provisions governing the amount of central bank financing. A brief review of the experiences of developing countries with central bank financing of deficits is varied. For instance, in Costa Rica, central bank finances 5% of government expenditure and 25% of the national budget. In Bahrain, the maximum amount that can be borrowed is left open to negotiations between the central bank and the Minister of Finance. In other countries such as Korea, central bank financing is subject to congressional approval (Jácome *et al*., 2012). For a number of developed countries, central banks do not finance deficits at all. This is true for countries such as Australia, UK and New Zealand. Provisions in the Maastricht Treaty prohibit governments of the European Economic and Monetary Union (EMU) from borrowing from their national central banks, and there are debt limits within the EMU, which foster debt sustainability, and reinforce the separation of debt management from monetary policy. In contrast, provisions of the ECOWAS primary convergence criteria for central bank financing are 10% of previous year's revenue for all member countries. In some cases, legal provisions limit the amount of central bank financing of fiscal imbalances. However, Jácome *et al*. (2012) find that, the legal provisions on central bank financing of the government deficit seem to be inversely related to a country’s level of development. The implication is that where countries have lax laws, central banks are allowed to provide advances to the government and this is a common feature in many developing countries, especially those with shallow tax base and undeveloped financial systems. In a cross country examination of the legal provisions governing central bank credit to government, the following general patterns emerge: (a)there is minimal or zero funding of deficts by central banks in most developed economies; (b) short term financing to smooth out tax revenues fluctuations characterizes the experience of many developing and emerging market economies; (c) in many countries the maturity structure of the loan and the amount borrowed are determined by law. Some loans are capped at a small proportion of annual government revenues, and are priced at market interest rates, and their maturity falls within the same fiscal year; (d) in some countries financing other areas of the state such as provincial governments and public enterprises is prohibited (see Jácome *et al*. 2012).

The varied experience of developing and developed countries with central bank financing of deficits reflects the different economic and historical experiences. It equally highlights the important role of deficit financing since large and persistent budget deficits may jeopardize macroeconomic stabilization as they by far determine most of the macroeconomic indicators including but not limited to growth, inflation and interest rates. Continual financing of fiscal deficits by central banks may thus undermine their operational autonomy.

3. Macroeconomic implications of alternative configurations of deficit financing

One channel of financing deficits is borrowing: external and domestic. Externally, the government can resort to borrowing project and programme loans from multilateral institutions as well as issuing sovereign bonds on international financial markets. Although this method could limit the crowding out effect, it adds to the debt burden through interest payment, besides the tight conditions that may come with it. It is instructive to note that large portions of Ghana's debt were contracted at floating interest rate and debt-servicing cost is likely to be affected due to the recent increase in interest rates by the US Federal Reserve. Provisional fiscal figures for 2015 shows that the share of external debt service in overall government expenditure has grown from 2.3% in 2011 to 4.7% as at September 2015 (Ministry of Finance, 2015). This may increase budgetary outlays in the coming years which, in turn, could lead to larger deficits. Interest rates on the sovereign bonds have mostly been determined on the market and have been a bit unfavourable to Ghana's economy. For instance, in 2015, the government secured its fourth Eurobond of $1 billion at 10.7% coupon rate with maturity of 15 years. Neighbouring Côte d'Ivoire paid 6.625% in 2015 while Senegal's Eurobond yield was 6.25% in 2014 most likely due to their relatively stable macroeconomic environments (Economist Intelligence Unit, 2014). The double digit yield for

Ghana’s bonds substantially increases Ghana’s borrowing costs and makes it expensive to access global capital. It is therefore prudent to suggest that addressing the current domestic pressures and bringing the public finances in balance could enable access to capital at reasonable costs. Interestingly, while the cost of the $1billion Eurobond bond is expensive in international markets, it could not have been cheaper to raise more funds domestically as current yields in the local debt markets are around 25%. These high coupon rates have severe ramifications for domestic private investments and economic stability, as seen in decline domestic real investment and escalating debt service cost which further constrains social spending. Reliance on external borrowing sources, which is mostly in foreign currency, changes the exchange rate, which ultimately affects the value of the external debt expressed in domestic currency.

In addition to the external borrowing, the government also resorts to domestic financing, mainly from banks including Bank of Ghana (BoG) and commercial banks as well as the non-banking sectors. Past fiscal deficits have been financed through borrowing from commercial banks and the private sector (non-banks and other domestic sources). This is usually preferable because it does not add up to foreign debt and is anti-inflationary. Borrowing from domestic commercial banks as a financing option does not involve creation of money except when the bank decides to accommodate the additional demand for credit from the commercial financial institution by supplying them with additional reserves. Palley (1994) sees this to be an extreme position because in practice, central banks have the discretionary power over the supply of reserves and ultimately bank credit. This move is thus intrinsically seen as an indirect way of deficit financing. The consequence of this alternative culminates in reduced credit to the private sector as a result of higher interest rate and this by far decreases investment and output. The effect is also akin to borrowing from domestic non-bank financial sector as a means of deficit financing. Apart from putting pressure on interest rate and crowding out private investment, borrowing from domestic non-banks distort interest rates especially when the non-bank sector is obliged to keep government bonds. The net effect may be a dysfunctional financial system where yields on government securities are always preferrable to any other investment leading to less financial intermediation by banks and other lending institutions.

In as much as borrowing is key in financing budget deficits, the interest payment has in the past added tremendously to public debt. As it stands, official statistics from the Ministry of Finance (2015) reveal that, the share of interest payment on debt in overall government expenditure has grown from 8.5% in 2008 to 23.2% as at September 2015, and domestic debt takes a substantial amount of this. Given this fact, it may be useful for government to curb its borrowing requirement, and make more effort to reduce interests payments (this goes hand in hand with having a sustainable deficit such that it will not cause bond yields to rise) as well as the cost related to government debt by having the right mix of government securities.

Apart from commercial banks, the government, until the recent directive from the IMF, had relied heavily on financing from the BoG. The main channel through which central banks in general finance budget deficits is through money creation or by increased credit to the banking system. Although the direct cost of this approach could be very low, it could eventually have broader negative macroeconomic consequences. Conventional wisdom suggest that central bank financing of the government deficit would increase the monetary base, consequently money supply and could prove inflationary and undermine the independent status as well credibility of the central bank, on which the effectiveness of monetary policy largely hinges. It is against this premise that most advanced economies have placed a ban on any form of central bank financing of budget deficits. Yet, in most emerging and developing economies, including Ghana, this is not the case partly because of their level of development, lapses in tax administration and ultimately revenue generation and weak capital markets for raising the needed domestic funding.

Under the current provisions of the BoG act, government (the central government as well as other agencies classified as government in the BoG statement of accounts) are entitled to temporary advances from the BoG. Such advances could be in the form of loans to the government on overdraft or any other form, direct purchase of treasury bills or securities representing obligations of the government. Compared to the experiences of other developing countries that have had a history of fiscal prudence, Ghana’s current legislation appear too lenient and generous. This inevitably has consequences for managing sound public finances. It is thus worth recommending that restricting central bank advances to benefit only the central government could help limit the rate at which the BoG has to finance debts accrued by the government through issuing of new bonds or treasury bills, that is monetization on the one hand, and more importantly, make it easier for the BoG to manage any potential systemic liquidity. More importantly, central bank lending to government should only be invoked with the view to smoothing out tax revenue fluctuations and severe and unforeseen shocks such as disaster or extreme unfavourable movements in export revenues. Such funding should be as transitory as possible and the borrowed funds should be settled in as relatively a short period as possible, for example, within the same fiscal year in which the funds are borrowed. To this end all financing advanced by the central bank to parastatals, quasi government agencies and departments are inimical and limits the ability of the central bank to adequately play its monetary policy roles while preserving its operational autonomy.

4. Conditions of optimal central bank financing and their limitations

The optimal level of central bank financing of the government's deficit is primarily defined by law. This in turn should normally be informed by sound economic analysis of the level of the country's development, its revenue and expenditure capacities and its growth potential. Thus the question of what is the optimal level of fiscal deficits is consistent with growth is largely an empirical one which must be addressed as such. In many cases the *dejure* provision sets the limits to borrowing. In Ghana, this limit is stipulated in the Bank of Ghana Act, 2002, Act 612, Section 30(2). The *dejure* institutional arrangements caps the BoG's loans, advances, purchases of treasury bills and securities from government, along with money borrowed by government from other banking institutions and the public, at less than or equal to 10% of total revenue of the fiscal year in which the advances were made. In addition, the maximum maturity of the loan as per the regulation is three months and the BoG in consultation with the Minister of Finance charges interest on these advances. It is plausible to argue that if these caps to borrowing from the central bank are strictly followed, and the pay back periods implemented, perhaps deficits may not grow out of proportion. However, as explained below, having fiscal rules that are not binding is as worse as not having them at all.

A number of practical realities emerge from the caps on central bank financing and their implications. For example, the law does not declare an unambiguous limit on what the BoG alone should take up as its portion of that 10% and the portion that should be taken up by the other banking institutions. Moreover, in contrast to the rules, deficit financing from the BoG along with sources outlined above have in most cases exceeded the 10% cap. For instance, available fiscal data from the Ministry of Finance (2015) indicates that total financing from BoG and commercial banks as a percentage of total revenue was 11.97% in 2008, 14.78% in

2012, 18.83% in 2013 and 12.20% in 2014. There have also been instances where actual financing from the BoG's side alone (without other commercial banks) has been very high and sometimes even exceeded 10% of total revenue and grants for the fiscal year – 10.18% (2008), 13.18% (2012), and 8.19% (2015). In another context, the West African Monetary Institute outlines that the convergence criteria for member countries of ECOWAS is for the respective central banks' financing of fiscal deficit not exceeding 10% of previous year's tax revenue. Yet, the BoG's practice over the years has deviated from this as well. Available data shows that BoG financing of government deficit was 12.1% in 2001, 27.7% in 2003, 38.7% in 2007, 8.8% in 2011 and 21.4% in 2012 (Government of Ghana, 2013). The *de facto* behaviour of the BoG funding of deficits is diametrically opposed to the *dejure* caps, and seems to suggest that political institutions determine the extent to which the BoG rules are enforced. This could in fact undermine the effectiveness of the BoG's monetary policy unless the over runs are brought in line through internal discpline/and or imposed externally as a conditionality for a bail out. Given internal lassitude, the former seem unlikely making the IMF ECF one possible avenue for bringing the public finances to a sounder footing. However, the requirements of zero BoG financing for 2016 and 2017, although necessary appear too draconian. The forgoing discussion suggests the optimal policy for central bank deficit financing is only possible if the spending rules can be rigorously applied, and the ambiguity surrounding the composition of this cap is clearly delineated and defined after the IMF ECF expires. All lending by the central bank to the government should reflect prevailing market conditions in terms of the returns on borrowed funds and the maturity should be within the same fiscal year in which the borrowing occurred. Without explicit strict rules of this kind, flagrant breaches of the spending caps could continue and there is no possibility of keeping faith with the domestic objectives of stability and the ECOWAS primary convergence criteria. Further, without strict the risk of overriding the autonomy and credibility of the central bank could be very high.

Besides the law, other factors play an indirect role in determining the optimal level of central bank financing. Specifically, macroeconomic conditions play a major role in determining the optimal financing budget deficit. It is instructive to note that the BoG is the sole institution empowered to maintain price and currency stability. Ideally its financing of the budget deficit must be guided and be consistent with the objective of achieving its target inflation (single digit as contained in its recent medium term monetary policy). However, central bank financing of government deficit fuels inflation as the bank creates high powered money and this has implications for welfare and the current account. Needful to state that, the central bank can make this option unattractive for the government only if its autonomy is guaranteed. Consideration of alternative configurations from this option could have different fiscal impacts. On the one hand, placing a strict restriction on the BoG's role in deficit financing could ensure effectiveness of its monetary policy tools in ensuring price stability and promoting growth. The caveat, however, is that if the deficit-financing still relies on lending from commercial banks then it is likely to lead to similar effects as the BoG financing, so there may have to be limits on commercial banks' credit to other borrowers. On the other hand, where BoG financing apply, then it should be such that its monetary policy is still capable of keeping inflation low without any other adverse macroeconomic consequences. This would probably imply lending to a tune below what has been done in the past years.

5. Some lessons from emerging market economies

5.1. Alike but very different

Ghana, Brazil and Chile are emerging market economies. The three countries have had a history of misalignments in exchange rates, ballooning fiscal deficits, runaway inflation and large public debt. All three have implemented IMF supported stabilisation programmes to correct major distortions with varying degrees of success; Brazil from the 1960s and mid-1990s and the 2000s; Ghana and Chile from the 1980s. At the moment all three have an inflation targeting regime, and like Ghana, the two Latin American countries, until recently, underwent very similar political upheavals with military dictatorships: Brazil from 1964 to 1994 and Chile from 1973 to 1990. The three countries have had a single commodity contributing substantially to exports, government revenue and employment. Brazil has been the largest world producer of coffee for the past 150 years; Ghana is the second largest producer of cocoa in the world and Chile produces a third of the world's copper.

There are, however, significant disimilarities. Brazil currently has the world's ninth largest economy by nominal GDP valued at $1.799 trillion[2]. Adjusting for Purchasing Power Parity (PPP), Brazil had a GDP of $3.3 trillion, Chile $401 billion and Ghana $148 billion in 2014. This gives a per capita income of $15,941 (nominal $9,312) for Brazil, $23,165(nominal $14, 911) for Chile and $5,173 (nominal $1,776) for Ghana[3]. Accordingly, Chile is now classified

[2] CIA – The World Factbook – Country Comparisons – GDP (purchasing power parity)". *Cia.gov*. Retrieved 03 December 2015.

[3] Ghana Brazil and Chile country report. *International Monetary Fund (IMF)*.2014

as a high income country by the World Bank[4] and it became the first Latin American country to join the OECD[5]. Not surprisingly, Chile has the lowest debt to GDP among the three of 15%, while Ghana and Brazil are now around 70% of GDP. Ghana has recently signed up to an extended relief programme aimed at stabilising the economy. Brazil has been a beneficiary of IMF rescue packages, the most recent one being in June 2002 when a bailout of $30.4 billion was extended to help stabilise the economy[6], an amount which was quickly returned to the IMF in 2005, one year ahead of time. The contrasting fortunes of Brazil and Chile in macroeconomic and public finance management may thus yield useful lessons to guide policy in Ghana.

5.2. Fiscal prudence: the case of Chile

For most of the 1970s and 1980s Chile's economy was characterised by financial repression, *inter alia*, directed and quantitative controls, from interventions in exchange and interest rates, to nationalised industries. At the time of the fall of Salvador Allende in 1973, the annual inflation rate was 286%. Three months into the office of the new military regime of Augusto Pinochet caused further distortions leading to a high inflation rate of 508%. A shrinking productive sector, with most assets under government control through expropriations and other government interventions in the economy coupled with the external shocks of the early and late 1970s introduced a very precarious economic environment for growth. The fiscal situation was not better. The budget deficit reached 55% of expenditures and 20 % of GDP and was the main cause of inflation because the Central Bank of Chile (CBC) was issuing money to finance the government deficit (see Büchi, 2006). Since the 1980s, however, several reforms, political and economic, have yielded dividends. The focus here is on the public finances. For detailed analysis of Chile's reforms, see Büchi (2006).

Chile has been a good example of fiscal prudence in emerging and transition economies. This has been the result of years of fiscal discipline, sound institutions and prudent legislation that has kept public finances in relative good shape. The role of the central bank in this regard has been critical. Chile's central bank became independent in 1989. Although, the main issuer of public debt has been the Central Bank there are strict limits on its mandate. In recent memory the only instances where debt was issued in large amounts was the period 1982–83 coinciding

[4] "How We Classify Countries". World Bank. Retrieved 02 December 2015.
[5] "Chile's accession to the OECD". *OECD.org. 7 May 2010.*
[6] "Brazil to pay off IMF debts early". *BBC News. 14 December 2005*. Retrieved 02 December 2015.

with Chile's banking crisis, and in the 1990s due to sterilized reserves accumulations (see Claro and Soto, 2012). Under section 27 of Chile's Central Bank Act it is explicitly stated

"The Bank may grant financing or refinancing to banking entities and financial institutions exclusively. Under no circumstances shall the Bank grant to such entities and institutions its guarantee, nor acquire securities issued by the State, its agencies or state-owned enterprises. No public expenditure or credit of whatsoever nature may be financed with loans granted, directly or indirectly, by the Bank.

These caps on central bank financing and Chile's fiscal prudence rest on a number of pillars that are worthy of note: a) Binding fiscal rules b) Effective coordination of fiscal and monetary policy c) Policy consistency across political regimes.

The first lesson for Ghana from Chile's prudent approach to public finance is binding fiscal rules. Since the late 1980s the Chilean government has managed its fiscal policy very conservatively. In 2001 a fiscal rule was promulgated to keep revenues and expenditures in tandem. These rules were not very binding and were subsequently revised and enacted as the Fiscal Responsibility Act (FRA) in 2006. The FRA required the government to adopt an explicit fiscal target for its structural budget so as to keep fiscal expenditure in line with long-term or structural fiscal revenues. This rule, with minor modifications has been implemented and followed to the letter by the authorities, with Chile recording positive balances in its budget. This has consequently led to the accumulation of large stocks of public assets with very little need to issue public debt to finance expenditures and/or roll over existing debt. Government debt to GDP averaged 13.45% between 1992 and 2014, and is currently estimated at 15% of GDP. Explicit commitment to fiscal rules, and good institutions can thus be beneficial in managing public finances.

The second pillar rest on sound coordination of both fiscal and monetary policy. As from 2001 Chile's fiscal policy has been guided by a fiscal rule based on the concept of the structural balance. The level of government revenues is driven by economic activity and fluctuations in copper prices. To ensure sound and smooth fiscal policy over the medium term, expenditures are set at the levels consistent with the structural balance, where revenues are adjusted according to the cyclical position of the economy and copper price deviations from long-run trend. Chile's tax system is fairly simple and broad-based and the structural balance indicator has been used to assess properly the fiscal stance of public sector budget. Therefore, setting a certain level for the structural surplus as the target of the fiscal rule is equivalent to delineating a desired path for public debt. Inflation and interest rates are less relevant since the tax system is indexed and debt is low (Thuronyi, 1996). Additionally, the Central Bank of Chile (CBC) is mainly responsible for maintaining currency stability and the normal functioning of domestic and foreign payments. Thus the CBC is constitutionally prohibited from financing any form of government liabilities, unless in exceptional circumstances such as war or national emergency. This disciplined and coordinated approach to public finances provides another lesson for policy makers in Ghana.

Lastly, there is policy consistency across political regimes in terms of management of public finances. The FRA requires incoming administrations to announce targets for the structural balance during their term with annual updates of outturns. Three presidents have ruled Chile since 2006 and the public finances are very much intact. This level of transparency and continuity, coupled with positive windfalls in copper prices during most of the last 20 years have contributed to Chile's remarkable economic transition from third world to a first world economy and accession to OECD membership in 2010.

5.3.Fiscal profligacy: the case Brazil

Brazil presents another lesson in public finance management that policy makers in Ghana may want to learn from. Although the country has made significant strides in the past three decades, transitioning from third world to one of the largest emerging market economies, a critical examination of Brazil indicates that the structure of its economy still typifies a third world economic system, characterized by instability, and marked by occasional progress.

The achilles heel of the Brazilian economy before 1994 was inflation. From 1980 to 1995 the general price level increased by a factor of 1.0 trillion. The main culprit being government expenditures not financed through taxes or borrowing, but simply money printing. A series of economic reforms dubbed 'Plano Real', enacted in 1994, stabilized domestic prices (inflation dropped from 2,076% in 1994 to 7% by 1997), however, fiscal prudence eluded Brazil. It soon became clear that the inflation problem was linked to deep-seated public finance malfeasance and profligate spending at all levels of government. The three decades preceding 2000 were thus characterized by fiscal imbalances. The major approach from then on was to restore the public finances to a sound footing through the implementation of very strict laws that establishes targets and conditions related to the administration of the revenue collection and public sector expenditures. Thus in May 2000, Brazil implemented the Fiscal Responsibility Law (FRL) aimed at strengthening fiscal institutions and to provide a framework of fiscal planning, execution and transparency at the federal, state and municipal levels of government. The FRL required national and sub national governments to a regular reporting of spending and revenue plans and caps on borrowing. For example spending items are capped at 50% of federal government and 60% of state and local government spending. If these limits are breached in any given four-month period, the lapse must be redressed within the following eight months. The FRL also promulgated very strict penalties, including prison terms, for public officials who violate its provisions or engage in other proscribed fiscal actions. The *magnum opus* of the FRL is a "golden rule" provision which states that net borrowing cannot exceed the volume of capital spending. Loans between national, state, and municipal governments are outlawed, except in extreme conditions such as a natural disaster, war or recession (see Nascimento and Debus, 2002; Pereira, 2010).

In addition to the FRL, in Chapter II, Section I, Article 164 of the Brazilian Constitution, the central bank is prohibited from financing government debt:

"*The Central Bank is prohibited from directly or indirectly granting loans to the National Treasury and to any agency or entity that is not a financial institution.*" In the same provision, the role of the central bank is limited to regulating money supply and or the interest rate through open market operations (see Constitution of Brazil, 2014).

There is no question about the positive effect of the FRL with regard to the fiscal situations of Brazil's states. Whereas all states faced a deficit prior to the law, the consolidated state accounts systematically presented a surplus roughly equivalent to 4% of GDP after the law was enacted. A similar success story can be told regarding public debt. A succession of primary surpluses enabled the government to effectively reduce the GDP/debt ratio. There has been a reduction in net debt, which was estimated to be below 36 % in 2008.

However, there are indications that the gains made under the FRL and the restrictions on central bank financing have been eroded and Brazil has returned to the lost decade of the 1980s. Brazil's government debt to GDP averaged 57.2% from 2006 until 2014, reaching an all time high of 60.90% in 2009. In December 2015, Fitch, following an earlier lead by

Standards and Poor and Moody downgraded Brazil's debt to junk status. Brazil's economy is predicted to shrink by 2.5-3% in 2016. The fiscal deficit swelled from 2% of GDP in 2010 to 10% in 2015. Currently estimated at 70% of GDP, Brazil's debt is high and continue to grow. Most fundamentally too is the cost of servicing the debt which is now around 7% of GDP. Given a high inflation of 10.5%, Brazils central bank use of monetary policy to fight it may instigate more instability. Thus raising more revenues domestically and possibly abroad and reigning in expenditures may be the most plausible options for Brazil, at least in the short to medium term (see Economist, 2016). In contrast to the Chilean example, Brazil represents a case of lack of continuity in controlling public expenditures and sticking to rules of public spending. It is fair to admit that most of Brazils fiscal problems are driven by the falling commodity prices, nonetheless, failure to adhere to rules and good conduct tend to exaggerate the weaknesses of the economy.

6. Concluding remarks

This policy note has attempted to present a case for fiscal prudence, tempered by rules. The impact of central bank financing of deficits has been outlined and the effects of alternative configurations of central bank credit to government addressed. Two case studies of zero central bank financing of deficits and their outcomes on public finance management are presented to guide policy. The key conclusions of this policy note are as follows:

1. Optimal central bank financing in Ghana are defined by law, currently capped at 10% of previous years revenue. However, the law is not very clear whether this restriction is to lending to government alone or other agencies. Moreover, this restriction has not been strictly followed in the past. A revision of the current cap must be backed by an empirical estimation of the level of deficits that is consistent with Ghana's recent economic growth experience.
2. Central bank financing of deficits can be detrimental to economic growth and stability. Continuous central bank financing of structural deficits may undermine their operational autonomy. Where borrowing is allowed as defined by the caps in (1) above, such credit should be advanced to only the central government. Parastatals and other government agencies should be prohibited from using central bank credit. Where it becomes necessary for government to borrow, the caps should not be exceeded. Borrowing by government should be transitory, and only in extreme

conditions. And the borrowed funds should be priced at market rates and repayment should be within the same fiscal year.

3. Consistency and coordination between fiscal and monetary policy, continuity across political regimes and a promulgation of a binding Public and Fiscal Finance Act (PFFA) to determine what the government can and cannot do with respect to public finances is necessary as the experience of both Chile and Brazil shows.

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