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Coordination of Monetary and Fiscal Policies: The Case of Egypt

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Coordination of Monetary and Fiscal Policies: The Case of Egypt

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Abstract

Coordination is defined as the necessary arrangements that assure that the decisions taken by monetary and fiscal authorities are not contradictory. The need for effective coordination of policies becomes pressing with the increasing independence of both authorities to implement their objectives. The purpose of the paper is to investigate the extent of coordination between monetary and fiscal policies in Egypt over the period (1974-2015). Quantifying the extent of coordination depends on the appropriate policy mix that responds effectively to different shocks. The results confirm that coordination of policies was absent or weak during most of the period under study, while it has slightly improved since 2003. However, there is still a room to improve coordination between policies, particularly after the issuance of the CBE law No. 80 of 2003 which renders monetary policy to be effective to accomplish its primary objective. Hence, the need for proper coordination of policies materialized with the issuance of the CBE law which guarantees independence to the central bank in conducting monetary policy with the aim of maintaining price stability. The paper evaluates the current institutional arrangements that characterize the coordination between monetary and fiscal policies in Egypt. This is followed by critical recommendations of the required institutional arrangements towards enhancing better coordination of both policies.

Key Words: Monetary policy, fiscal policy, coordination between policies, the Central Bank of Egypt (CBE), public deficit, debt management office.

JEL Classification: E 58, E 61, E 62

1. Introduction

The primary objective of monetary and fiscal policies is to achieve sustainable economic growth while maintaining price stability. According to the classical theory of Tinbergen and Theil, the attainment of two policy goals requires more than one policy instrument. Hence, depending on either monetary or fiscal policy is insufficient to attain the targeted combination of economic growth and stable prices. This has led to the emergence of a new policy environment under which the sole dependence on either fiscal or monetary policy is inadequate to achieve the macroeconomic targets. Since the early 2000s, there has been an increasing worldwide trend to guarantee independence to central banks with price stability being its main target. In addition, financial market development has enabled fiscal policy to focus on cost minimization through public debt management. The need for effective coordination between policies, hence, becomes pressing with the independence of both authorities to implement their objectives. In recent years, the need for coordination of policies has been increasingly reinforced in the face of global financial and economic crisis. Coordination is defined as the necessary arrangements that assure that the decisions taken by both authorities are not contradictory. In other words, a policy decision will not cause undesirable indirect effects and spillovers to the other policy with the aim of harmonizing the macroeconomic policy mix (Begg et al. (2003), Kamal (2010)).

Successful coordination becomes particularly insistent when adopting structural reforms together with liberalizing the financial sector. That's because reform programs require appropriate and sustainable fiscal policy to enhance macroeconomic stability, proper taxing system and regulatory framework of the financial sector (World Development Report, 1989).

Nonetheless, failure to coordinate policies properly has negative influences on the economy which could vary from financial instability resulting in high interest rate, exchange rate pressures, high inflation rate to poor economic performance. According to Blinder (1982), the lack of coordination could result from three main reasons: (i) different objectives of both fiscal and monetary authorities towards the economy; (ii) different opinions of both authorities about the possible effects of monetary and policy actions derived from different economic theories and (iii) different forecasts about the state of the economy made by the two authorities.

A number of necessary conditions are required to maintain efficient coordination of policies. First, sustainability of policies must be ensured such that each policy medium term path is sustainable. Second, credibility of both policies should be maintained through stabilizing the public's expectations. Third, the varying time frames of policies' adjustment operations must be taken into consideration. In other words, adjustment of fiscal stance takes a long time, whereas monetary stances could be frequently adjusted. Fourth, objectives and policies of monetary and fiscal policies must be jointly determined. Indeed, coordination of policies is

necessary in any economy regardless of its phase of development. Nevertheless, it differs with different circumstances that characterize each economy such as development of financial markets, exchange rate regime and other institutional arrangements (Laurens and De la Piedra, 1998).

Moreover, coordination guarantees the commitment of policy makers to agreed-upon objectives, thereby eliminating the time inconsistency problem¹. In this context, authorities may coordinate through regular meetings to design different policies and their implementations. Otherwise, coordination may be enhanced by setting a number of rules and actions.

Despite emphasizing the importance of coordination of monetary and fiscal policies in a large number of literature, studies that quantify the extent of coordination are still limited. Moreover, emphasizing the importance of coordination between policies in Egypt is currently a hot issue in particular with the current foreign exchange, government budget and balance of payments problems. In addition, implementing urgent economic structural reforms and fiscal consolidation is a demanding issue. According to the sustainable development plan, the government aim to increase the growth rate to reach 12% by 2030 accompanied by stabilizing the accelerated inflation rate. Indeed, the efficient accomplishment of the targeted growth and inflation rates necessitates effective coordination between both authorities. This, in turn, facilitates achieving the different policy objectives in an efficient manner.

Within this framework, this paper aims to examine the extent of coordination between monetary and fiscal policies in Egypt over the period (1974-2015). The empirical findings confirm that coordination of policies in Egypt was absent or very weak during most of the period under study, while it has slightly improved since 2003 with the issuance of the Central Bank of Egypt (CBE) law No. 88 which guarantees independence to the monetary authority.

The rest of the paper is structured as follows: a review of the literature is introduced in section 2. This is followed by the methodology used in section 3. Then, the institutional arrangements towards coordination between policies are discussed in section 4. Finally, section 5 concludes.

2. Literature Review

The necessity for better coordination between monetary and fiscal authorities has been emphasized in many studies. That is because, although both policies are conducted separately with independent authorities, making a distinction between them is a complicated issue and their goals could be often conflicting. In one hand, monetary policy influences many variables that affect the environment in which fiscal policy functions such as, short-term interest rates, inflation, inflation expectations and the risk premia included in the long-run yields. The fiscal

¹ A plan is time inconsistent if the government wishes to alter its plan as time passes, while a time-consistent plan – given that it is optimal – intended in period t will not change in period $t+j$ for all j .

consequences of the level of interest rate emerge from the cost of servicing the public debt, thereby, influencing the fiscal sustainability. High inflation, as well, affects the public finances through an increase in the tax burden, which, in turn motivates the so-called Olivera-Tanzi effect that refers to the erosion of the real value of taxation.

On the other hand, fiscal policy affects monetary policy through a number of direct and indirect channels. The fiscal effect spills over through high fiscal deficit, with which monetary policy may be forced to monetize the deficit. This, in turn, induces an expansionary monetary policy, raises inflation expectations and disturbs the exchange rate which affects the balance of payments negatively. Even if the fiscal deficit is not monetized but financed through the market, the crowding-out effect weakens economic growth and development. Another effect is the indirect taxes which could raise the price level, thereby resulting in a possible spiraling of wages and prices. Also, fiscal policy influences monetary policy by affecting aggregate demand through alteration in tax levels that affects consumption and investment decisions. In addition, high government debt could influence the yield curve through raising the long-term real interest (Engen and Hubbard (2005), Checherita and Rother (2010) and Hubbard (2011).

The issue of interaction between monetary and fiscal policies has been traditionally discussed within the framework of Mundell-Fleming model in which internal balance is the fiscal policy's main objective, while external balance is the monetary policy's objective (Mundell, 1962). Then, Sargent and Wallace (1981) in their pioneering paper "Some Unpleasant Monetarist Arithmetic" regarded the interaction of policies as a non-cooperative game between both authorities that entails coordination of policies to achieve Pareto outcomes. They described the interaction of monetary and fiscal policies as a game of chicken in which the agent who moves first dictates his rules on the other. They stated that, even in a monetarist environment, fiscal policy may act as a dominant authority, thereby rendering monetary policy to lose control over the price level. They stated that inflation, even though it is a monetary phenomenon in the short-run, turned out to be a fiscal problem in the long-run. This, in turn, puts emphasis on fiscal discipline as a prerequisite for monetary stability.

Similarly, under the Fiscal Theory of the Price Level (FTPL) assumptions², a better coordination of policies is necessary for price determination since monetary policy alone cannot provide a nominal anchor for the economy (Leeper, 1991, Woodford, 1994, 1995, 1996, 2001, Sims, 1994, 1997 and Cochrane, 1998, 2001, 2005). The essence of the FTPL is that appropriate monetary policy must be accompanied by appropriate fiscal policy in order to be able to stabilize the price level. Moreover, it imposes a certain coordination framework between both policies in order to solve the price indeterminacy problem. This coordination involves one of

² The FTPL states that the price level is basically determined by fiscal considerations, since the fiscal solvency conditions determine the equilibrium price level and the fiscal policy provides the nominal anchor.

two frameworks; (i) a monetary policy satisfying the Taylor principle should be associated with fiscal policy that satisfies the Ricardian equivalence proposition³, (ii) a monetary policy that is not satisfying the Taylor principle should be accompanied by a fiscal policy in which the Ricardian equivalence does not hold. Thus, the coordination problem is more challenging under the FTPL. A central bank's commitment to Taylor rule to stabilize the price level must be associated with a fiscal commitment to target the real value of budget deficit. So, price stability necessitates the movement of both policies in a coordinated way.

Another approach of an increasing number of literatures viewed the interaction problem as a game between monetary and fiscal authorities. Hence, future policies could be regarded as the equilibrium outcome of a dynamic game between the two authorities (Blinder (1982), Tabellini (1985, 1986, 1987), Petit (1989), Tabellini and La via (1989), Nordhaus, 1994). According to Tabellini (1986), coordination of policies accelerates the economy's convergence to the steady state after being hit by economic shocks. Nordhaus (1994) stated that a non-cooperative play of both authorities will result in Nash equilibrium with high interest rate and deficit. However, cooperative strategy between authorities has a Pareto outcome with low inflation rate and higher economic growth.

The issue of coordination of policies has been recently analyzed within the context of the European Monetary Union (EMU) formation. Under this economic policy framework, the European Central Bank (ECB) is the sole monetary authority that plans the monetary policy for all member countries, whereas fiscal policy remains the responsibility of individual countries. Therefore, a powerful coordination framework is essential to guarantee an appropriate functioning of the EMU, in particular with the increasing interdependence in the Euro area and the resulting spillover effects of national policies on other member countries. For instance, a policy action that affects the average inflation rate or exchange rate has its consequences on the ECB decision regarding the interest rate or the exchange rate (European Commission Directorate-General for Economic and Financial Affairs, 2002).

The EMU formation has raised many questions that were discussed in a number of recent papers. Begg et al. (2003) and Panico and Suárez (2008) assessed the form of policy coordination in the EU and proposed some recommendations to reform the system. Similarly, Plasmans et al. (2006) examined the institutional design of the coordination of macroeconomic stabilization policies within the EMU and its effect on macroeconomic outcomes and policies.

³ Recall that in the Ricardian equivalence proposition, government policy choices to finance its spending either through debt or increasing taxes do not matter because they both have a similar effect on aggregate demand. Thus, households do not change their spending patterns as a result of, for instance, cut in taxes because a rational forward looking consumer recognizes that lower taxes or higher budget deficit in present necessitates an increase in taxes in the future.

Another trend of analysis discussed the desirability of international coordination of fiscal policies in the EMU for macroeconomic stabilization (Beetsma et al., 2001).

The recent global financial crisis has revived many studies that discussed the rationale of coordination of policies after the crisis. Using GMM dynamic panel data models, Gomes da Silva and Vieira (2014) examined the conduct of policies for a panel data of 113 advanced and emerging/developing countries before and after the crisis. The findings show that monetary policy reacts counter-cyclically, while fiscal policy reacts in a procyclical manner. Also, the interest rate mechanism proves to play an important smoothing role around the world.

Studies dealing with coordination between policies in Egypt are still limited. El-Refaie (2001) and Kamal (2010) discussed the importance of coordination and the required institutional arrangements. El-Refaie (2001) stated that satisfactory coordination between monetary and fiscal policies and operational management was behind the success of the reform program till 1997/98. Subsequent to the internal and external shocks that hit the economy starting from 1997/98, coordination of policies became more challenging. Coordination of policies takes place when the two institutions are independent. El-Refaie (2001) maintained that the increasing tendency to guarantee independence to both authorities, along with the Ministry of Finance (MOF) plan to set up a new debt management unit and adopting a more flexible exchange rate regime require a particular mode of coordination. Such coordination needs to be of policies' objectives and instruments, in addition to new legal, institutional and operational arrangements.

3. Methodology

In reality, the form of coordination between policies differs across countries based on the country's exchange rate regime and the depth of its financial market. Following Arby and Hanif's (2010) approach, our purpose is to explore the coordination between policies in Egypt besides assessing its extent quantitatively over the period (1974 – 2015). The ratio of domestic liquidity to GDP (M2) is taken as an indicator of monetary policy and the ratio of government expenditure to GDP (Exp) is used as a stance of fiscal policy⁴. Testing for stationarity, the unit root tests indicate that the monetary and fiscal stances are stationary $I(0)$ at 5% and 1% significant levels respectively.

Table 1: Results of the Unit Root Test

Variables	ADF Test (Levels)
M2	-2.979314**
Exp	-4.170785***

Note: Critical values were obtained from Mackinon (1996), where the critical values are -3.610 at 1% and -2.943 at 5% significance levels respectively.

⁴ Note that in Arby and Hanif's (2010) approach, the ratio of budget deficit to GDP is used as a stance for fiscal policy. However, using government expenditures as a stance for fiscal policy has become increasingly favorable.

It should be noted that the extent of coordination depends on the appropriate policy mix that responds effectively to different shocks. Given that real GDP growth rate and inflation rate are the major indicators of economic performance, shocks to both indicators represent the macroeconomic imbalances that necessitate proper coordination of policies to address them. These shocks are summarized in table (2) where there are four possible combinations of positive (P) and/or negative (N) shocks to growth rate or inflation. For instance, the upper left corner cell refers to positive shocks to both growth rate and inflation, while the lower left corner cell refers to negative shocks to growth rate and positive shocks to inflation.

Table 2: Macroeconomic Environment Matrix

		Inflation	
		Positive	Negative
		Positive	PP
Negative	NP	NN	

After constructing the macroeconomic environment matrix, another matrix that represents the coordinating behavior of monetary and fiscal policies is constructed. In the policy response matrix, policies are assumed to be countercyclical to different shocks as shown in table (3). Thus, each cell in the policy response matrix represents the appropriate policy coordination to respond to certain shocks in the corresponding cell in the environment matrix. To clarify, the proper countercyclical behavior to respond to positive shocks to both growth and inflation is simultaneous contractionary fiscal and monetary policies.

Table 3: Policy Response Matrix

		Monetary Policy	
		Contraction	Expansion
		Contraction	CC
Expansion	EC	EE	

In the case of Egypt, the environment matrix is constructed based on the growth rate of real GDP and inflation rate data in Egypt over the period (1974 – 2015). Then, shocks to growth rate refer to the deviations of the real GDP growth rate from the sample average. Also, shocks to inflation are identified as the divergence of inflation from the threshold level of inflation (9 percent) as suggested by Kheir-El-Din and Abou-Ali (2008).

With regard to the policy response matrix, changes in the ratio of domestic liquidity to GDP and changes in the ratio of government expenditures to GDP represent stances for both monetary and fiscal policy respectively. So, expansionary policies are defined as positive changes in the stances, whereas contractionary policies are identified by negative changes in

the stances. The data of domestic liquidity and government expenditures are derived from the CBE annual reports, while the real GDP and inflation data are from the World Development Indicators.

The extent of coordination (ρ) is obtained through the following equations:

$$\rho = \omega / \sigma$$

$$\omega = n (PP \cap CC) + n (PN \cap CE) + n (NP \cap EC) + n (NN \cap EE)$$

σ is number of years in the analysis.

Indeed, a perfect coordination exists when the policy response matrix is harmonized with the macroeconomic environment matrix, i.e. ρ equals 1, while coordination is absent when $\rho = 0$. Constructing both matrices of Egypt yields the following tables.

Table 4: Macroeconomic Environment Matrix of Egypt

		Inflation	
		Positive	Negative
Growth	Positive	1976-1980, 1982-1985, 1988, 1990, 2007-2008	1997, 1999-2000, 2006
	Negative	1981, 1986-1987, 1989, 1991-1993, 1995, 2004, 2009 -2011, 2013-2015	1994, 1996,1998, 2001-2003, 2005, 2012

Table 5: Policy Response Matrix of Egypt

		Monetary Policy	
		Contraction	Expansion
Fiscal Policy	Contraction	1980,1985, 1987, 1989-1990, 1992, 1995-1997, 2004, 2007, 2010-2012	1977,1979, 1991, 1993-1994, 1998, 2002, 2015
	Expansion	1976, 2000, 2008-2009	1978, 1981-1984, 1986, 1988, 1999, 2001, 2003, 2005, 2013-2014

From the above two tables, the extent of coordination can be calculated as follows:

$$\omega = n (PP \cap CC) + n (PN \cap CE) + n (NP \cap EC) + n (NN \cap EE)$$

$$\omega = 4 + 0 + 1 + 3 = 8$$

$$\rho = 8 / 40 = 0.20$$

Likewise, the extent of coordination in Pakistan has reached 0.27 over the period 1965-2009, i.e. coordinating policies occurred only in 12 years out of 44 years under study. Furthermore, their study proved that the coordination between policies in Pakistan did not improve even after the establishment of Monetary and Fiscal Policies Coordination Board in 1994.

Results obtained from tables (4) and (5) confirm that coordination extent was the lowest with simultaneous positive inflation and negative growth rate. On the other hand, coordination

between policies was the highest (0.375) with negative shocks to inflation and growth rate. With the purpose of tracing the progress of coordination of policies over the period under study, the extents of coordination (ρ) are calculated for four sub-samples, according to the development of both policies; that are derived from the full sample as follows:

For the period (1976-1991), $\rho = 4 / 16 = 0.25$

For the period (1992-1997), $\rho = 0$

For the period (1998-2002), $\rho = 1 / 5 = 0.20$

For the period (2003-2015), $\rho = 4 / 13 = 0.31$

The outcome of the previous test confirms that coordination of policies is absent or weak during the first three sub-samples, while it has slightly improved since 2003 with an extent of coordination that reaches 31%. If this was not the case, inflation rate would have been lower and fluctuations of output would have been stabilized. In fact, coordination of policies takes place when the two institutions are independent. Hence, the need for proper coordination of policies materialized with the issuance of the CBE law No. 80 of 2003 which guarantees independence to the central bank in conducting monetary policy with the aim of maintaining price stability. However, monetary policy was subservient to the fiscal policy during the first three sub-samples. Even under the ERSAP⁵, monetary policy was ineffective because of the commitment to maintain fixed exchange rate with the open capital market⁶.

Several instances in the recent history demonstrate the lack of coordination between policies in Egypt. For instance, the economic boom experienced during the period (2005-2008) was supposed to be accompanied by a contractionary fiscal policy instead of an expansionary one as manifested in the high fiscal deficit. Hassan (2007) found that the relation between fiscal policy and real GDP which goes in one direction from the former to the latter is weak. This, in turn, implies that the fiscal policy in Egypt – as many other developing countries – is procyclical rather than countercyclical, thereby exacerbating macroeconomic instability. The study also proved the dominance of fiscal policy over monetary policy because the relation between the fiscal policy and monetary policy demonstrates to be strong and goes from the former to the latter. Furthermore, though the CBE law of 2003 grants independence to monetary authority in conducting its policy, monetary policy has been ineffective in stabilizing the economy. This could be explained by two main factors: (i) the effect of government borrowing; which is the largest borrower in the country, on the medium and long-run interest rate and (ii) the exchange

⁵ The ERSAP is an Economic Reform and Structural Adjustment Program that was implemented in 1991 and ended in the late 1990s.

⁶ A trilemma that is known as “the impossible trinity” which refers to the inability of any country to achieve three simultaneous goals, which are fixed exchange rate, open capital market and an independent monetary authority.

regime which was quasi-fixed⁷ – as per the IMF classification of exchange rate – over most of the period since the abolishment of the fixed exchange rate regime since 2003.

The next section evaluates the current institutional arrangements that characterize the coordination between monetary and fiscal policies. This is followed by critical recommendations of the required institutional arrangements towards enhancing better coordination of both policies.

4. Institutional Arrangements towards Coordination between Policies

4.1 The Central Bank Independence

Many literatures focused on the advantages of independent central bank that is protected from political pressures and has clear objectives and operational autonomy. However, possible costs occur when there is lack of coordination between an independent central bank and fiscal authority. Actually, successful monetary policy framework with independent central bank should develop efficient methods of coordination of monetary and fiscal policies (Walsh, 2011).

Since absolute independence does not exist, so independence is a matter of deciding the suitable degree of delegating responsibilities to the central bank from the political authority. The next step is to determine the paramount arrangements to maintain the central bank independence and the proper mechanisms to assure accountability for the central bank's actions. Furthermore, efficient central bank independence should be assigned a primary objective. In this regard, recent central bank legislations in many countries set up price stability as the central banks' primary objectives (Laurens & De La Piedra, 1998). The Law No. 88 of the year 2003 of the CBE, the banking sector and money in article No. 5, states this objective clearly:

The Central Bank shall work on realizing price stability and banking system soundness, within the context of the general economic policy of the state. The Central Bank shall set, in agreement with the government, through a coordinating council to be formed by decree of the President of the Republic, and the Executive regulations shall determine the work system of the said council.

As an extension to two previous studies⁸, the degree of CBE independence was quantified in a study by Kamaly and Farrag (2007) over the period (1961- 2004). Their study used four indices that capture any divergence between the central bank independence in laws and practice.

⁷ According to the IMF classification of exchange rate regimes, Egypt was included in the conventional fixed peg arrangements since the regime operating de facto in the country is different from its de jure regime. Under this arrangement, the country pegs its currency within margins of ± 1 percent or less vis-à-vis another currency. The exchange rate may fluctuate within narrow margins of less than ± 1 percent around a central rate—or the maximum and minimum value of the exchange rate may remain within a narrow margin of 2 percent—for at least three months (Classification of Exchange Rate Arrangements and Monetary Policy Frameworks, 2006).

⁸ The first is a cross-country study by Cukierman et al. (1992) who investigated the degree of independence from a legal and behavioral context over the period (1950-1989). The second study focused on the degree of independence before and after the amendment of the CBE law of 2003 by Ewiss (2003) without including the behavioral indices.

The first is the legal index which shows the degree of independence given by laws. The other three are behavioral indices namely the rate of turnover of central bank governors index, the questionnaire based independence index and the political vulnerability of central bank governors index. They concluded that the CBE independence is at moderately low degree compared to some Latin American countries which achieved higher degree of independence of their central banks. Comparing the legal index with the behavioral indices stresses the need for legislative amendments to narrow the gap between law and practice. Moreover, they were able to introduce several recommendations to increase the degree of CBE independence because two of their indices included several economic, financial and political indicators. Their findings emphasized that the CBE should be solely responsible for monetary policy with price stability target. Hence, the government should amend the legal framework and the CBE law to reduce its dominance over the monetary authority and to assure the political autonomy of the CBE. The chief improvements should be undertaken in considering the CBE as the lender of last resort, direct credit to the government and settlement of conflicts with the political authorities.

4.2 Eliminating Conflicts between Monetary and Fiscal Policies

Arrangements should be taken to avoid conflicts between both policies through eliminating their inconsistencies. This could be done through adopting an economic policy directed to achieve the economic stabilization goal – the so-called in recent economic literatures “Stability Oriented Economic Policy”. This policy – which is a pre-condition in joining the Euro system - is a necessary condition to achieve financial and macroeconomic stability. That’s because adopting this policy will resolve the conflict between price stability and economic growth goals in light of the general agreement on the negative impact of high inflation on economic growth (Kamal, 2010). The rising ability of the Brazilian economy to cope with crisis provides an astonishing example of the effect of the Stability-oriented economic policy of the past decade. This stabilization policy was basically founded on fiscal discipline, a monetary policy that targets a pre-defined inflation rate and a flexible exchange rate (Eder, 2010).

An independent central bank is a key element in the stability oriented economic policy that is assigned a clear objective of stabilizing the price level. Laurens and De La Piedra (1998) maintained that this framework provide arrangements to avoid inconsistencies between both policies. This, in turn, will resolve the traditional conflict between both policies that stems from two conflicting needs. In one hand, the government needs to find low-cost sources to finance its deficit. On the other hand, the central bank wants to raise the interest rates in order to offset the expansionary effect of fiscal deficit.

In spite of the CBE’s commitment to maintain price stability (Law No.88 of year 2003) and its agreement with the government on the monetary policy goals, a specific monetary policy rule or precise time to implement the inflation-targeting prerequisites is not announced. Moreover, debt management functions are delegated to the CBE due to the state of the financial

markets. Actually, arrangements to prevent conflict between both policies become increasingly compelling given the substantial size of public debt and budget deficit (Kamal, 2007).

4.3 Limiting Direct Credit to the Government

Putting regulations on direct credit from the Central Bank to the government is one of the most important legal arrangements required for coordination between policies, particularly in the early stages of monetary management based on market mechanism. Furthermore, this matter is directly linked to the central bank independence and the liberalization process. Imposing statutory ceilings on public debt or overdrafts to the governments had been conventionally applied. Nevertheless, these ceilings had proved to be ineffective since there were ways to get around them (Laurens & De La Piedra, 1998). The relation between the CBE and the government with respect to rules of borrowing is governed by Law No. 88 of the year 2003 Article 27, which states that:

“The Central Bank shall extend financing to the government, upon its request, to cover the seasonal deficit on the general budget, provided that the amount of such finance shall not exceed (10%) of the average revenues of the general budget in the three previous years. The term of said finance shall be three months renewable for other similar periods. It shall be settled in full within twelve months at most from the date of its extension. The conditions concerning this finance shall be determined, upon agreement between the MOF and the Bank, according to the prevailing credit and monetary conditions.”

Despite this limitation on lending to the government, a closer look at the development of government borrowing data in practice proves that this limitation has contributed notably to reduce the direct borrowing to government from the CBE since 2004 (refer to table (6)). It should be noted, however, that this limitation was moderately loose with an exception in year 2006 at which the ratio was estimated at 2.5% due to the fall in the CBE credit to the government (Kamal, 2007).

It should be noted that this arrangement reflects the depth of the financial sector development. That's because in the absence of a developed securities market the government has no choice but to finance its budget deficit through direct credit from the Central bank, thereby raising the money supply in the economy and hence, increasing inflation. This, in turn, contradicts with the Central Bank independence and its commitment to stabilize the price level. In fact, arrangements to limit direct credit, in particular the overdraft facilities, to the government have witnessed many developments all over the world. Furthermore, there is a tendency towards providing indirect credit to the government through optional buying of TBs in the secondary market (Kamal, 2010).

Table 6: The Compliance of the Government's Rules of Borrowing over the period (1992 – 2011)

At the end of June		Claims on Govt .(1)	Of which: Govt. Securities (2)	Direct Borrowing from the Cbe (3)=(1)-(2)	Average Revenues in the Last 3 Years (4)	Ratio Of Claims To Average Revenues (%) (1)/(4)	Ratio Of Direct Borrowing to Average Revenues (%) (3)/(4)
1992		54934	32656	22278	24438	224.8	91.2
1993		53114	31142	21972	31151	170.5	70.5
1994		49081	29623	19458	38889	126.2	50.0
1995		48092	29576	18516	46892	102.6	39.5
1996		46703	28486	18217	51663	90.4	35.3
1997		44755	28634	16121	56393	79.4	28.6
1998		48849	29004	19845	60370	80.9	32.9
1999		62303	32758	29545	64451	96.7	45.8
2000		77697	33158	44539	68580	113.3	64.9
2001		94545	79734	14811	72769	129.9	20.4
2002		113231	98484	14747	75494	150.0	19.5
2003		131689	116512	15177	77784	169.3	19.5
2004		175579	163629	11950	85013	206.5	14.1
2005		218450	206034	12416	95176	229.5	13.0
2006		167685	164761	2924	117645	142.5	2.5
2007		192192	166724	25468	147448.3	130.3	17.3
2008		159697	123123*	36574	184295	86.7	19.8
2009		146899	121708	25191	228041.3	64.4	11.0
2010		150288	121533	28755	257341	58.4	11.2
2011		189620	130597	59023	271968.3	69.7	21.7

The decline was ascribed to the settlement of rescheduled debts -under Paris Club agreement- between the CBE and the government

Source: Updated data from Kamal (2007) since 2007, from the Central Bank of Egypt (CBE) Annual Reports, different issues.

4.4 Public Deficit Constraints

This arrangement is closely related to the institutional arrangements to support the fiscal discipline. An increasing number of countries applied the so-called Fiscal Policy Rules with the purpose of maintaining sound public finances. For instance, the objective of the “Stability and Growth Pact” which is a centerpiece of policy coordination under the EMU is to maintain fiscal disciplines according to the ‘Maastricht’ criteria. According to this pact, the size of budget

deficits in member countries is restricted to 3% of GDP in the short-term with some exceptions when GDP fall by at least 2% (Begg et al., 2003).

The Egyptian government targeted successfully the budget deficit as a percentage of GDP during the stabilization program. Nevertheless, this target was not included – as a restriction on fiscal actions – in the budget plan. Therefore, the budget deficit target was broken in 1997. Furthermore, there is a lack of legislative framework to maintain fiscal discipline that enhances the role of monetary policy in stabilizing the price level. This, in turn, resulted in escalating public debt and budget deficit in the last years (El-Refaie, 2001).

More recently, the increasing awareness of the escalating burden of the public debt has necessitated urgent actions. Thus, the main target of the state budget proposal for 2005/2006 was determined to reduce the fiscal deficit by 1% of GDP per annum for five years. This could be implemented through a range of measures that included rationalizing subsidies and restraining the wage bill growth. However, Abdel-Khalek (2007) argued that these measures do not represent a precise and consistent debt management policy. That is because these measures ignore the fundamental factors behind the increase in public debt. Also, a specific target for the domestic debt to GDP ratio is not determined, along with the failure to recognize the goals of the debt management policy and the clear ways to achieve these goals. Moreover, he maintained that these measures either expenditures-reducing or revenues-increasing are biased in favor of the rich at the expense of the poor. This, in turn, has adverse implications on poverty and income distribution.

4.5 The Central Bank Profits and Losses

Though central banks are nonprofit-maximizing institutions, they could yield considerable profits and losses that have important implications on the monetary policy and public debt management. Thus, the banking law must include a compulsory statement for the way to treat the central bank's profits and losses. Since central banks' losses could cause monetary expansion, it is crucial to take appropriate arrangements that enable the central bank to accomplish its primary objective of controlling inflation. As for the CBE's profits, El-Refaie (2001) stated that they should be subtracted from the MOF debt to the CBE instead of being deposited in the Ministry's current account with the central bank. According to the Presidential Decree 59, article 17 and law 163, article 11, transferring annual net profit of the CBE to the government is obligatory. Nonetheless, there is absence of a mandatory statement regarding the coverage of the CBE losses.

According to Laurens and De la Piedra (1998), many central banks' laws include provisions concerning dealing with losses based on the government intervention to cover these losses. That's because these losses result from functions conducted by the central bank such as quasi-fiscal or from the execution of monetary policy which represents an element in macroeconomic policies. It should be noted that the prevention of "leaks" that result from off-budget

transactions or quasi-fiscal operations is critical. A special attention should be given to the quasi-fiscal deficit⁹ and its implications on the coordination of fiscal and monetary policy. In fact, quasi-fiscal deficit that results from the central bank losses should be eliminated.

4.6 Relationship between the Central Bank and the Treasury

The origin of the central banking goes back to the seventeenth century with the foundation of the first institution recognized as a central bank, the Swedish Riksbank. In fact, the rise of early central banks was driven by the need to finance government's debt during wartime, not to provide monetary services (Broz, 1998). This inherited perspective continued to influence the role of central banks as fiscal agents besides the nature of their functions as Multi-Functional institutions. Recent tendency, however, moves toward separating monetary policy from debt management to avoid the conflicts of duties and interests between both authorities. This trend implies transferring the responsibility of debt management to separate office and reducing the role of central bank as a fiscal agent. The issue becomes increasingly important and related to coordination of policies. Nonetheless, it necessitates satisfying some preconditions to achieve the economic policy's objectives, i.e. market development, stable economic framework and the availability of indirect instruments for monetary management (Laurens and De La Piedra, 1998).

4.7 Establishment of a Separate Debt Management Office

The largest and most complex financial portfolio in any country is the government's debt portfolio. Hence, vulnerability to economic and financial shocks increases with inadequately structured debt portfolios, in addition to being the cause of economic crises. Being aware of the importance of public debt management, the International Monetary and Financial Committee and the World Bank together with experts of public debt management cooperated to prepare guidelines for public debt management. Its purpose is to help policy makers in the process of reforms to their public debt management and reduce the countries' vulnerabilities to financial shocks either domestically or internationally (Guidelines for Public Debt Management, 2002).

Some countries such as New Zealand and Sweden were able to establish a separate debt management office with separate objectives, instruments and functions. This step was associated with financial markets development to allow for cost minimization that is considered the major objective of public debt management. However, separating a debt management office in countries where financial markets are undeveloped may cause difficulties to the debt management function. That's because debt management could have substantial effect on the level of interest rates and the performance of domestic capital markets (Kamal, 2010).

⁹ Quasi-fiscal deficit arises as a result of publicly owned enterprises that provide services at low prices, in addition to not being able to assure full payment collection. The quasi-fiscal deficit is not reported in documents, thereby distorting the true fiscal position and generating considerable contingent liabilities (Tchaidze, 2007).

The public debt management in Egypt is carried by the CBE that acts as a fiscal agent to the government. In the context of dealing with the domestic public debt problem, a new system of “primary dealers” was introduced in July 2004. The primary dealers system is believed to increase the dependence on open market operations which is a monetary policy instrument and to support dealing with the secondary market. According to the standards required in the primary dealers in the primary markets, 15 banks satisfied these requirements and were licensed to deal with the Egyptian TBs and bonds (CBE Annual Report, 2003/04).

4.8 Coordination Committees

Given the importance of coordination between policies, both authorities should share an understanding of the public policy objectives. Coordination in many countries is implemented through setting up coordination committees which assist reaching a consensus on how debt and monetary management should be conducted. These committees consisted of representatives from the MOF, the treasury, the debt office and the central bank. They meet regularly to exchange information concerning the government’s financing need, to discuss the outcome of the government’s cash balance projections, to watch the level of liquidity and market progress and to agree on the plan of accomplishing public debt and monetary management objectives. Soon after markets development, effective coordination with informal contacts may replace the frequent formal ones (Laurens & De La Piedra, 1998).

Generally speaking, the coordination committees across countries often perform similar functions that can be summarized in the following points (El-Refaie, 2001):

- 1- Based on the government’s cash flow needs, they set plans regarding the regular sales of securities, taking into consideration the monetary policy objectives.
- 2- Discussing the consequences of meetings with financial institutions about the used and proposed debt instruments.
- 3- Modifying the arrangements in the secondary market such as clearing and settlement, automation, supervision and regulations.
- 4- Altering the arrangements in the primary market concerning the auction procedures, the regularity of offerings and the introduction of new instruments.
- 5- Performing studies and recommending certain policies regarding the longer term monetary and debt management policies.

Since the start of the reform program in Egypt, the need for coordination has been acknowledged since the CBE formed a TBs committee that included a representative from the MOF. Actually, the coordination in Egypt is conducted on two levels (Kamal, 2007):

- The Coordinating Council is at the forefront of the institutional framework that forms the relationship between the CBE and the MOF.
- The Monetary Policy Committee (MPC) related to the CBE.

First, the coordinating council¹⁰ has been established according to the Presidential Law No.17 of year 2005 which states that:

“The Coordinating Council shall determine the targets of the monetary policy in a way that realizes price stability and banking system soundness, within the context of the general economic policy of the state. The Prime Minister shall determine the issues to be referred to the council.”

In its first meeting in April 2005, the coordinating council agreed on maintaining the central bank independence in designing the monetary policy and using the appropriate instruments. Moreover, the council assured its support to the CBE’s policy that aims to control inflation and stabilize the price level, along with stabilizing the foreign exchange market. Consequently emphasizing transparency, the CBE has to issue a periodical statement about the monetary policy. Despite the importance of the coordinating council, its role was confined on reviewing the developments of the monetary policy without taking decisions to face the challenges imposed on the macroeconomic policy (Kamal, 2007). Moreover, the coordinating council did not meet on a regular basis unlike the statement of the executive regulation to meet every three months. With emphasis on its important role and target, the coordinating council has been recently restructured by a President decree while maintaining the membership of Global economic expert Mohamed El-Erian, former CEO for global investment management firm Pimco, and including Abla Abdel Latif who is currently head of the presidential economic consultancy committee and Farouk El-Okdah, former Central Bank governor. Hopefully, this reform will reinforce the coordinating council vital role in coordinating both policies’ objectives and instruments.

Second, the MPC¹¹ is responsible for monetary policy decisions, which are implemented through a set of tools and instruments. Within the new framework of the overnight interest rates on interbank transactions, the MPC determines the outer bounds of the interest rates the so-called Corridor System. This corridor includes the overnight interest rate on lending from the bank as its ceiling and the overnight deposit interest rate at the bank as its floor. These overnight interest rates represent the CBE main policy instruments, besides the open market operations conducted to absorb excess liquidity. The MPC meets regularly to take decisions regarding the interest rates based on reviewing a number of monetary, financial and economic indicators with the purpose of stabilizing the price level in the medium term. In order to enhance credibility and transparency, a press release is published after each meeting for the MPC (CBE Annual Report, 2005/06).

¹⁰ The Coordinating Council stated in Presidential Law No.17 of year 2005 was established under the chairmanship of the Prime Minister and the membership of 12 members: the Minister of Finance, the Minister of Planning, the Minister of Investment, the Governor of the CBE, two Deputy Governor of the CBE, besides the membership of six expertise in the economic, banking and financial affairs.

¹¹ The MPC is composed of nine members including the Governor of the CBE, the two deputy governors and six members of the Board of Directors.

4.9 Operational Arrangements

4.9.1 Monetary Programming

The monetary programming, as a framework to design a consistent monetary policy, contributes significantly to achieve certain targets within a specific time horizon, besides reflecting the interaction between monetary and fiscal policies. There are two types of monetary programming. The first is Broad Money Program that includes assessment of monthly and quarterly projections of main monetary aggregates. This type is mainly applied when financial sector is undeveloped and direct instruments are used in the monetary management. It contributed to pursue the monetary and fiscal policies' objectives, manage the demand and supply for broad money and determine sources of domestic credit. Moreover, the Broad Money Program determines the projected change in money stock¹² in light of developments in net foreign assets based on the balance of payments objectives and the change in net domestic assets taking into consideration projected inflation rate and real GDP growth rate (Laurens & De La Piedra (1998) and Kamal (2010)).

The second type of monetary programming is the Reserve Money Program which provides an operational framework to conduct daily monetary management since it includes weekly and daily forecasts of the main central bank's items in the balance sheet. Applying this type of program comes as a result of developed financial sector and the use of indirect instruments. This framework should effectively reveal the main sources of reserve money growth which could be summed in three main sources; (i) net credit of the Central Bank to the banking system, (ii) net credit of the Central Bank to the government and (iii) net foreign assets of the Central Bank (Laurens & De La Piedra, 1998).

As the CBE's use of direct instruments has been altered by the indirect instruments since 1995/96, the monetary management becomes increasingly dependent on the institutional arrangements between the MOF and the CBE to guarantee fiscal discipline. Within this framework, the central Bank intervenes to assure consistency of reserve money with monetary policy intermediate targets. Such intervention is conducted by indirect tools of monetary management, such as open market operations, standing facilities and reserve requirements. This, in turn, necessitates coordination between both policies to carry out the debt management operations (El-Refai, 2001).

4.9.2 Coordination on a Daily Basis

The way the government finances its deficit is necessarily related to monetary policy. The cash flows associated with the government's borrowing, in general, affect the daily liquidity in the money market to a large extent. Hence, decision makers on debt management and monetary

¹² Δ Money Stock = Δ Net Foreign Assets in the banking system (NFA) + Δ Net Domestic Assets in the banking system (NDA).

policy should be aware of others' proceedings in both the primary and secondary markets. This, in turn, stresses the importance of coordination between monetary and fiscal policies at the micro-level (Gray, 1996).

Laurens and De La Piedra (1998) maintained that the government's receipts and expenditures account could be maintained either as a single consolidated account of Treasury at the central bank or as deposits with commercial banks for the purpose of cost minimization such as the United Kingdom, the United States, Germany, Canada and Malaysia. In either approach, information on cash flow forecasts must be shared for the debt management and monetary policy. In one hand, the debt management authority is concerned with minimizing the cost of debt service by managing the cash balances. On the other hand, monetary authority is concerned with the government cash balances repercussions on liquidity.

In order to enhance the daily coordination of policies, several central banks have adopted a reform program of the money market. Their aims were to stabilize the overnight interest rates to match the official interest rates announced by the monetary policy committees related to the central banks, as well as providing a proper framework to manage liquidity. Moreover, projections of the government's cash flow are important both for debt management and monetary policy and should be shared between them. With regard to the debt management authority, the government's cash flow is crucial for the issuance of public debt arrangement. This, in turn, has an effect on controlling the growth rate of central bank credit and organizing the Treasury account balances with the central bank. As for the monetary policy, the timing and size of monetary operations depend basically on the government's cash flow projections. Forecasts errors must be discussed between both authorities to investigate whether they are temporary and would be self-corrected or are permanent due to more fundamental reasons that need to change the stance of macro-policies (Laurens & De La Piedra (1998), Kamal (2007, 2010).

5. Conclusion

The accomplishment of the macroeconomic objectives of price stability and growth entails achieving an optimal mix of policies that are meant to complement each other. This implies the establishment of better coordination between both policies in order to secure high and sustainable economic growth with price stability. Emphasizing the importance of coordination between policies in Egypt is currently a hot issue in particular with the current foreign exchange, government budget and balance of payments problems. Indeed, the efficient accomplishment of monetary and fiscal policies' targets necessitates effective coordination between both authorities.

Within this framework, this paper aims to examine the extent of coordination between monetary and fiscal policies in Egypt over the period (1974-2015). Quantifying the extent of

coordination depends on the appropriate policy mix that responds effectively to different shocks. The results confirm that coordination between policies has been either absent or weak in Egypt over the period (1974- 2015). Nonetheless, there has been a slight improvement in the coordination of policies since 2003 with an extent of coordination equals 31%. However, there is still a room to improve coordination between policies, particularly after the issuance of the CBE law of 2003 which renders monetary policy to be effective to accomplish its primary objective. This result of weak coordination is due to high fiscal deficits that put pressure on monetary policy to conduct its objective in stabilizing prices, in spite of the moderation of fiscal dominance of monetary policy through phasing out monetization. Thus, the paper ends with an assessment of the institutional arrangements of coordination between both policies in Egypt along with critical recommendations of the required modifications towards enhancing better coordination between both policies. The paper introduced several recommendations to increase the degree of CBE independence through amendment of the legal framework and the CBE law to reduce fiscal dominance over the monetary authority and to assure the political autonomy of the CBE. The chief improvements should be undertaken in considering the CBE as the lender of last resort, direct credit to the government and settlement of conflicts with the political authorities.

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