Monetary Policy and Price Stability in Egypt

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Abstract

Monetary policy in Egypt is one of the important frames that will form of the economic features and will be led to the transaction of the economy is flexible through price stability that's one indicator attractive the investor to invest in the country. The monetary policy has changed in the strategy that is including the ultimate target, the intermediate target, and the operational target. The main objective of the ultimate target keeps the price stability, the intermediate target developments in money supply and credit, and the operational target important to the interbank rate .(The Egyptian Center for Economic Studies.2011.p1)

1. Introduction

Monetary policy is part of and a tool of macroeconomic policies that have to meet the required targets through monetary or currency policy instruments; plays a crucial role

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in molding the economic character of a country, an appropriately conceived monetary policy can significantly aid economic growth by adjusting the money supply.

Monetary policy is that the process by which the govt, monetary authority, or central bank manages the availability of cash. it's an instrument for achieving the target of general policy i.e. economic process, full employment, and price stability by influencing the extent of aggregate demand and thereby the extent of cash income.

Control over the quantity of money is the core of monetary policy that is used to influence the level of income and employment; it involves changing or controlling the quantity of money that ways as to cause an increase in the level of income or to maintain income as the desired level.

The monetary policy can prevent money itself from being a major source of economic disturbance and the stable rate of growth of the money supply would create stability of expectations concerning wages and prices. "Price stability" is usually interpreted to mean a low and stable rate of inflation maintained over an extended period. The ideal rate of inflation is zero, properly measured. Biases in price indexes imply that, in practice, price stability will likely be consistent with a small positive rate of measured inflation, depending on the specific price index.

2. Statement of The Problem:

The problem of research is that the Egyptian economy suffers from instability in prices, which negatively affects economic stability and thus becomes an obstacle to economic reform in Egypt. Therefore, we find that monetary policy has a

positive impact on price stability in Egypt during the period from 2006 to 2020.

As the Central Bank of Egypt aimed to price stability according to law No.88 / 2003 by implementing monetary policy. Thus we found the CBE used the discount rate and the broad money to affect the interest rate of the loan and finally thus effectively on the Consumer Price Index. That is the following below.

	Jan.2006	**Mar.2016**	**Jun.2020**
Discount Rate	6%	11.25 %	9.75 %
Broad Money	529,594.03	1,988,273.89	4,538,807.54
CPI	138.30	176.1	107.7

▪ **Source: Central Bank of Egypt.**

3. The hypothesis of The Research:

The Monetary Policy has a Positive Impact on Price Stability in Egypt.

4. The Methodology of The Research:

The research is based on following the deductive approach by researching the relationship between the development of monetary policy in the framework of economic thought and to achieve price stability in Egypt during the period from 2006 to 2020.

5. The objective of The Research:

The goal of the research is to ascertain the truth or error of the previous hypothesis by identifying the development of monetary policy and its role in achieving price stability in Egypt during the period from 2006 to 2020.

6. Literature review:

The literature offers various explanations for how monetary policies in developing countries influence the cost

and availability of credit, manage inflation, and keep the balance of payments in balance.

Anowor,Oluchukuf.Andokorie,Georgchisom(2016)
Using an error correction model, the analysis empirically reassessed the effect of monetary policy on Nigerian economic development. It made use of secondary time series data from 1982 to 2013. According to the findings, a one-unit rise in Nigeria's cash reserve ratio (CRR) resulted in a seven-unit increase in economic development.

Sumon, kurmar.Ali,M.Kutan.andSudipa, Maujmdar (2016)
Kurmar,sumon,sumon,sumon,sumon,sumon, M.Kutan, Ali, and Sudipa, Maujmdar (2016) The study looked into the progress of banking reforms in India, which has seen major banking reforms since the 1990s. We measure whether monetary policy reform has a predictable effect on borrowing behavior of several types of companies, including business group related, unaffiliated private firms, state-owned firms, and international firms, using the assertion that well-functioning credit markets constitute a bank funnel for monetary policy at work.

JarmoiarBenes, AndrewBerg, Rafael A. Portillo, And, David Vavra (2015)
The study's main contribution is to expand the traditional inflation targeting of the New Keynesian small-open-economy paradigm to incorporate FX interventions as an autonomous central bank instrument. A rule for FX intervention that works in tandem with interest rate policy and the impact of invention strategies on balance sheets, as well as the possibility of interest-rate-based inflation targeting and a controlled float or fixed exchange rate coexisting. The study showed that

intervention policies can help insulate the economy against certain types of shocks, also. Shown that, in some cases, limiting exchange rate adjustment can also be counterproductive from a welfare prospective study.

Matemilola, Bany,and Fatima(2015)

This paper examines the money market rate's long-run interest rate pass-through to the bank lending rate, as well as the bank lending rate's asymmetric reform. The effect of monetary policy on the economy has long stirred the focus of monetary economists and policymakers. The money market rate is chosen because changes in the policy rate affect the money market rate, then bank lending rates. As a result, increases in the money market rate are more closely linked to changes in the bank lending rate.

Using traditional augmented Dickey-Fuller and Philip-person analyses, the bank loan rates and money markets are shown to be incorporated in order one before checking for co-integration. These tests are used to calculate the stationary of the bank loan rate (BLR) and money market rate (MMR) factors. The empirical findings back up the consumer reaction hypothesis, which notes that banks operating in a highly competitive environment may be unable to raise lending rates for fear of negative feedback from borrowers or consumers.

Corzone(2014)

The thesis empirically explores the effect of monetary policy on Kenyan economic growth. It explains how policy-driven shifts in monetary policy decisions affect policy objectives such as productivity and inflation. The monetary transmission mechanism's most distinguishing feature is its dependence on values (interest rates, exchange rates, and other commodity prices) rather than numbers (money, credit, base money, bonds,

foreign assets). The model is the VAR model, and the analysis concludes that economic growth is unresponsive to monetary policy shocks, implying that other variables affect Kenyan economic growth. The interest rate channel, led by the credit channel, is found to be the most powerful in controlling economic development, according to the report. The monetary policy shock accounted for 14.98 percent of inflation growth over the time frame under consideration.

Frank (20014)

Price stability is not a necessary condition for financial stability, and a lack of financial stability can have significant negative feedback effects on price stability, so monetary policy mechanisms have mainly concentrated on preserving price stability. Second, it hastened the emergence of a modern policy field known as macroprudential policy, which was motivated by Crockett's and his colleagues' early contributions at the Bank for International Settlements (BIS .(

This was motivated by the recognition that maintaining the soundness and protection of individual financial institutions was insufficient to ensure the financial system's stability, and that a structural solution to financial stability was needed. The financial crisis has hastened the adoption of a new economic domain known as macroprudential policy, which aims to preserve financial stability. The repercussions for the monetary policy system, on the other hand, are hotly contested, with some advocating for minor tweaks to the market-stability-focused mechanisms in place before the crisis, while others advocate for a fundamental rethink that puts financial stability on an equal footing with price stability and merges the macro-prudential and monetary policy goals.

Chuku (2009)

Measuring what monetary policy can do (as well as what it can't) is critical for effective policymaking and choosing among macroeconomic alternatives. The research aims to see how monetary policy innovation (unanticipated shifts) affects the business cycle. Surprisingly, the potential for using monetary policy developments to generate real economic results in a developing economy like Nigeria is less obvious. The uncertainty can stem from inherent imperfections in commodities, currency, and labor markets, as well as the nonsticky existence of prices. As a result, monetary policy changes can simply flow through to prices with little or no impact.

The thesis uses the conventional Mundell-Fleming-Dornbush model to examine the effects of monetary policy changes in Nigeria, which assumes a priori that expansionary monetary policy lowers interest rates, depreciates the real exchange rate, and raises inflation, money supply, and the pace of real demand. To address the assumptions at the root of the problem, the analysis uses a structural Vector Autoregression (SVAR) approach with recursively-orthogonalized identifying constraints.

The study's findings provide a solid foundation for good monetary policy execution in Nigeria, Other developing countries, observe that monetary developments are not always neutral. In the short term, depending on the monetary policy instrument used, central bankers should put a greater focus on the quantity-based nominal anchor (M2) for controlling the economy, as M2 has been shown to have the most impact on demand and prices

7. Monetary Transmission Mechanisms

It described how monetary policy changes impact real economic variables such as employment and aggregate output. Channels of monetary transmission affect real economic variables through the effects that monetary policy has on interest rates, exchange rates, equity, and real estate prices, bank lending, and firm balance sheets.

Several institutional and operational changes were initiated to help facilitate monetary policy adopting an inflation-target regime over the medium term. On June 2, 2005, the CBE introduced a rate of interest corridor as well as used two standing facilities, a deposit facility, and overnight lending. (RANIA A & Andreas B.2007. pp. 10-12)

a) The Interest Rate Channel

The interest rate channel is the main engine of the monetary policy that is an effect on the direct goal on changes to households (HH) and firms through the competitive banking system, but the degree of the pass-through of this channel varies across countries, according to the efficiency of the banking system.

b) The Exchange Rate Channel

This channel depends on interest rate fluctuations because of changes in domestic real interest foreign investors. Monetary authority when it tries to control the foreign exchange markets may also influence short-run exchange rate movements.

c) The Asset Price Channel

This channel implied policy effects on relative asset prices and real wealth. Two theories described the working mechanism of this channel, Tobin's q theory of investment and theory of wealth effects on consumption another alternative view to the wealth effect was the so-called liquidity effect. It worked

through any asset market including securities and real estate. The Cairo and Alexandria stock exchange (CASE) had gained much attention in light of the significant increase in market capitalization. Any increase in real prices over the last few years all across Egypt leading to higher household wealth.

d) Bank Lending Channel

This channel has two ways to affect the market that is through bank lending and balance sheet channels to affected small firms that cannot deal with financial markets directly through equity and bonds. Hence they relied on financial intermediaries to complete this missing link, Contracting MS negatively affected the bank reserves which limited the share of loans available for individual agents and firms; thus investment decreased and so was the level of output.

8. The Major Tools of Monetary Policy

The monetary policy instruments of the Central Bank of Egypt, like other banks Centralization or monetary authorities in different countries of the world, are limited to three main tools: Reserves, open market operations, and standing facilities.

a) Reserve Ratio

The Central Bank does not pay any returns to banks in exchange for maintaining bank accounts corresponding to the reserve ratio, which deprives Banks of the returns of employing that percentage of their deposits, which amount to 14%. It is planning with the legislative amendment to introduce in the Central Bank Act to approve the principle of paying dividends is decided by the Central Banks Board of Directors against those reserve balances. On the other hand, the rules for calculating the reserve ratio according to the latest amendments approved by the central bank include the

exclusion of certain types of savings and some other financial assets.

b) Open Market Operations

Open market operations are the most important factors guiding interest rates nominal short-term in the money market as an operational objective of monetary policy, as it helps to manage liquidity in the economy, in addition to giving traders in the money market suggestions Indicators of monetary policy trends. The CBE is making one-night purchase agreements for one week and a week at a time current without linking this to interest rate trends, but by linking to estimates of surplus reserves of banks as Already mentioned, in coordination with the overall direction of the proposed policy. Open market operations will depend on Existing tools along with several tools developed such as repurchasing agreements of government bonds.

c) Standing Facilities.

The nominal interest rate trends in the Egyptian monetary market in the short term are the chosen operational objective of monetary policy, the nominal interest rates provided by the central bank greatly help to pump or standing facilities to absorb liquidity from the market. If the short-term definition of target interest rate selection The interest rate in the money market for one night, To achieve this goal to use two new tools developed through the standing facilities provided by the Central Bank of Egypt to banks is a lending system banks for one night to pump liquidity into the market, and a one-night deposit system to absorb liquidity from Market.

9. Elements of a Price System

The price has considerable influence on any country's rate and pattern of development Which prices allocate resources and mobilize resources whether that determines the free market or established by central planning or agency modified by governmental policies.

When economic analysis deals with the allocation of scarce resources to alternative uses, that critical role to choice and valuation but if that has not to scare resource problem at that time all goods would be free goods. Therefore, the combined resources that are limited and alternative.it uses a price system to allocate resources.

a) Diminishing Returns and Efficiency

The Diminishing Returns lead to producer choice of the component of the factors of production like incentive labor more than capital and those increases in some inputs relative to other fixed inputs will. In a given state of technology. Cause total output to increase, but after a point, the extra output resulting from the same additions of extra inputs is likely to become less and less.

This reduction of extra returns may be a consequence of the fact that the new "doses" of the varying resources have less of the fixed resources to work with. However, when increasing all the factors at the same time to an equivalent degree, once you double all inputs.

b) A Competitive Price System

The characteristics of a price system are reflected in the operation of the forces of supply and demand. Demand and supply determine the price in any particular market, but as the forces of demand and supply change so too do the system of prices .

- The division of labor and specialization of productive activities is the utilization of these resources.

- Exchange transactions on markets, both products (output) markets, and factor (input) markets.

- The exercise of choice is among alternatives by economic agents an example of these households, business firms, and government. Every partner needs to maximize Satisfaction.

- Adjustment to environmental change is leading to a change in inputs production thus, changes in output, demand, and income distribution. (Meier, G. 1983.pp.19:21)

c) Elements of Demand and Supply

All transaction in the market that is for the consumer also the producer occurred through price determined. Those sides of the market affect the price by intersecting the demand and supply schedule and the amount supplied just matches the amount demanded.

10. Function of Prices

The functions of prices are the most important side to make clear how the price effect the market determination by applying the right price resolution. There are two extreme views of the role of the market in the functioning of economic systems. One proposes a "pure" market economy the other, "pure" central planning.

Therefore, the function of the price is information, allocation, rationing, mobilization, and distribution.

a) Information Function

By the market, the indication would know a suitable price to guide economic agents in decision-making. Because the price is a substitution ratio for exchange one thing for another. The information of the market avoids the decision-maker searching cost of the alternative factors that is more qualified and expensive through that incentive factor.

b) Allocative Function

The primer's function of the price system is allocated to scarce resources. The market mechanism is conformity with changes in the pattern of demand through determining the policy that results in the needs of the market when the demand raises in the specific sector also any commodity.

c) Rationing Function

When the demand for the commodity is rise without raising the price or the supply falls that allocates the scarce supply through rationing the limited supply. Like that, the government imposes a price ceiling on a product. There will be a shortage in the market. Also, this may commonly lead to rationing.

d) Mobilization Function

The price increase rations a scarce commodity and that motivates to increase in the supply. So that incentive the higher-cost producer to enter the market thus leads to an increase in the investment and scale of the product.

e) Distribution Function

The price of a product is the sum of the input cost that produced the output thus that affects the distribution of incoming. Any change in the income distribution of the owner of input resources determined by changes in prices. This distribution is the functional distribution of income. The distribution of income among households shall lead to determine by prices in other ways. (Meier, G. 1983.pp.73:105)

11.Pricing Strategy

A firm's policy determines under a price strategy, which that charge for products and service. That depends on cost-based pricing, the competition-based common factor among pricing strategies, and total revenue after cover the costs of operation and to allow a sufficient profit margin, which secures an acceptable return on investment.

Through the market, the condition is implied a competitive advantage, and in some cases regulatory constraints. There are several options to evaluate pricing strategy by given the buyer demand schedule and therefore the pricing strategy of competitors.

12.Monetary Policy in Egypt

From 1990 to 2005, the Egyptian Central Bank (CBE) concentrated on two main goals: inflation stability and exchange rate stability, except 1996/1997. While the CBE sought to limit monetary expansion, suggesting a contractionary strategy, it also called for a cut in the Egyptian pound's interest rate to stimulate investment and foster economic development, implying an expansionary policy. (Tarek A.2007.p7) In the 1993/1994 economic reform programmed, the focus of monetary policy shifted to the promotion of products in the productive sectors as a means of increasing aggregate productivity. During the two years, 1994/1995 to 1995/1996, the CBE's primary goal moved back to the expansionary monetary regulation and production growth recipe. Maintaining monetary equilibrium is what this entails. By-Law 88 for the year 2003 regarding the central bank, the banking sector, and foreign exchange, the CBE declared its overarching goal of focusing on market stability. The CBE intermediate and operating goals from 1990-1991 to

2004/2007 included the management of the average growth rate of domestic liquidity calculated in terms of the money supply, M2. The CBE's two operational target elements, nominal interest rate management and regulation of banks' excess reserves in local currency remained unchanged. After June 2005, the overnight interest rate on interbank deposits has been designated as the operating target. To achieve its objectives, the CBE mainly relied on indirect, market-based instruments like the necessary reserve ratio, reserve money, and open market operations, as well as a range of interest rates like the discount rate, Treasury-bill rate, and loan and deposit interest rates. (Rania R. 2010. pp. 25-25) It was put framework abandoned money targeting regime in favor of putting in place inflation targeting regime. Since the CBE does not explicitly preannounce an inflation goal or a series of goals that it is determined to achieve during the transition phase, the monetary policy regime may be defined as one with an implied nominal anchor. Aside from the overnight interbank rate, the CBE switched from a quantitative operating objective, surplus reserves, to a price target. It introduced two overnight standing facilities, one for deposit and the other for lending, that identify a rate range in which the interbank rate should fluctuate.

The corridor mechanism reduced interbank rate volatility during the monetary targeting period and enabled monetary policymakers to control interbank rates by adjusting key policy rates such as standing facility and open market operations rates. During this era, the Egyptian monetary policy faced two major breaks. To begin with, the move away from the fixed exchanges rate system that had been in place since the early 1990s until the official announcement of the Egyptian pound's

floatation in January 2003. Second, on June 5, 2005, the CBE launched the corridor structure as a new institutional mechanism .(Hussein A. 2017.p24)

The maintenance of macroeconomic stability after the three-year transformation after the 2011 revolution is a challenge: sustained economic development, low and stable inflation, and the competitiveness of the foreign and fiscal accounts. The projected fiscal consolidation, which includes price changes in many administered goods and services with a direct effect on inflation, is at the heart of macroeconomic stability. The gap output in these periods influences price elasticity and price stability across the margin of the scale of procurement, then the inflation target. (Abu Dhabi. 2015. P161)

In addition to representing the relationship between monetary and fiscal policies, monetary programming as a mechanism for designing a coherent monetary policy contributes greatly to achieving such goals within a defined time. the two types of monetary programming are as follows.

•   The Broad Money Program is the calculation of monthly and quarterly forecasts of major monetary aggregates as part of the Broad Money Program. When the financial system is underdeveloped and direct instruments are used in monetary administration, this is particularly so. It helped to achieve the goals of monetary and fiscal policies, control large money demand and supply, and identify domestic credit streams based on the balance of payments goals and changes in net domestic assets, taking into account expected inflation and actual GDP growth rates .

•   The monetary programming is the Reserve Money Software, or monetary programming, provides an organizational basis for conducting regular monetary

management since it contains weekly and daily estimates of the main central bank's balance sheet products. Because of the developed financial sector and the use of indirect tools, this form of software is used. The Central Bank intervenes in this framework to ensure reserve money compliance with monetary policy intermediate goals. Open market activities, standing facilities, and reserve conditions are examples of indirect monetary control mechanisms that perform such activity. (Sahar M.2016.p18)

The CBE launched the mortgage loan program in February 2014, supplying banks with long-term mortgage funding worth LE 20 billion in tranches to be lent to low and middle-income borrowers at below-market rates. The first tranche, worth LE 10 billion, was released for 20 years. The CBE's target is to hold inflation between 6 and 8% by the end of the medium-term period, with this goal acting as a crucial lever for fostering growth and enhancing export competitiveness while also adding to the government's social justice priorities by preserving the buying power of the people .

The Monetary Policy Committee (MPC) decided to cut policy rates by 50 basis points in January 2015 to stimulate spending amid hopes of lower global oil and commodity prices, which would curb imported inflation. (Egypt Economic Development Conference.2015.p14)

During the year 2016 to 2020, Egypt tended to effectively implement the economic reform program. One of the most important of these goals is price stability by liberalizing the exchange rate by supply and demand mechanisms

13. Measuring the Impact of Monetary Policy on the Price Stability in Egypt

The research is using the VAR model to test the effect of the monetary policy on price stability. The tests that are used as a pre-condition are the unit root test, Lag selection, and Johansen Cointegration Test. The result indicates all variables have a unit root in the level so we take the first difference for all variables after that we conduct a lag selection to select an optimal lag selection that shown 6 lag and finally, the Johansen Test for Co-integration confirm the results; the results showed that there at least 3Co-integrated variables. As Appeared in table 3, the four indicators have been individually estimated against the explanatory variables. As the below that variables.

DDR DBM DCPI DPPI

Table (1): The Variables, which are used in Empirical Implementation of the Monetary Policy and Price Stability.

Indicator	Measurement	Source
Broad Money (BM)	The sum of all financial instruments held by money-holding sectors. that are (1) medium of exchange widely used in an economy, or (2) close substitutes for the medium of exchange that are a reliable store of value.	International Monetary Fund
Discount Rate (DR)	The interest rate at which the central bank lends to commercial banks to meet their liquidity needs. Also, refer to country metadata for the specifics as rate definition often differs among countries.	International Monetary Fund

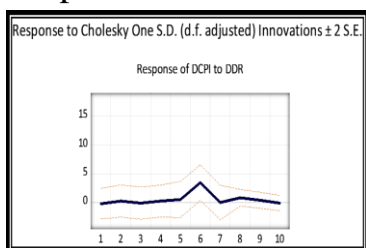|		
Inflation, Consumer Prices Index(CPI)	Inflation, as measured by the consumer price index reflects the change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.	International Monetary Fund
Inflation, Producer prices Index(CPI)	A price index is a measure of the proportionate, or percentage, changes in a set of prices over time. PPIs measure changes in the prices of domestic producer goods and services. Such measures need to distinguish between changes in the volume of domestic production and such changes in nominal terms. Because the prices of different goods and services do not all change at the same rate, a price index can reflect only their average movement. A price index typically assumes a value of unity, or 100, in some base period. The values of the index for other periods show the average proportionate, or percentage, change in prices from the base period. Price indices can also measure differences in price	International Monetary Fund

	levels between different cities, regions, or countries at the same point in time.	

The Impulse Response of Monetary Policy Variables on Price Stability Variables

The impulse response function indicates how the changes of each endogenous variable will be influenced by a specific impulse resulting from one of the endogenous variables.
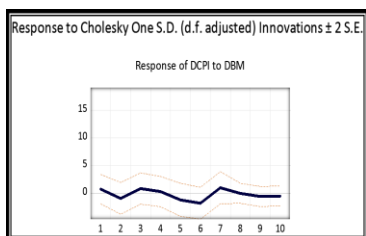
Graph 1 shows how the change in Discount Rate affects the Consumer Price Index, where this graph show doesn't affects in 4th month then have a positive relationship, where the positive shock of Monetary Policy by changing in Discount Rate will lead to a positive response in CPI, and this states that an increase in Discount Rate will economically lead to a decrease in Interest Rate, these results an increase personal loan than an increase in Consumer price, thus lead to recover the market economy and having price stability.
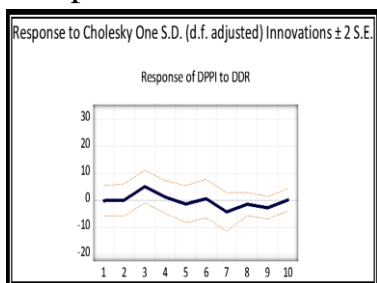
Graph 2 shows how the change in Broad money affects the Consumer Price Index, where this graph shows a positive then a negative relationship, where the positive shock of Monetary Policy by changing in the amount of money in bank accounts will lead to a decrease in the interest rate for borrowing, and this will economically lead to an increase in Consumer price when the commercial banks have enough operation on the broad money. The interest

rate will be an increase for borrowing that leads to a decrease in CPI.

Graph 3 shows how the change in Discount Rate affects the

producer Price Index for Natural Gas, where this graph shows a positive then a negative relationship, where the positive shock of Monetary Policy by changing Discount Rate will lead to a positive response in PPI, and this states that an increase in Discount Rate will economically lead to encourage of natural gas exploration, these results an increasing in Producer price for natural gas initially, thus lead to recover the market economy and having price stability. The PPI consider one type of inflation index but used to respond to the short-run effect.

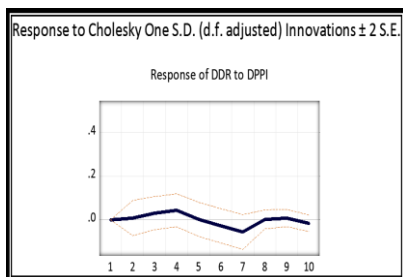Graph 4 shows how the change in Broad money affects the
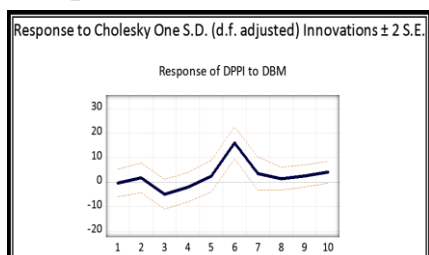
producer Price Index for Natural Gas, where this graph shows a positive then a negative and also a positive relationship, where the positive shock of Monetary Policy by changing in the amount of money in bank accounts will lead to encouraging of natural gas exploration, these results an increasing in Producer price for natural gas initially, thus lead to recover the market economy and having price stability.

The Impulse Response of Price Stability Variables on Monetary Policy Variables.
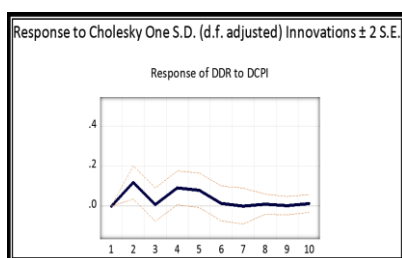
Graph 5 shows how the change in the producer Price Index for Natural Gas affects Discount Rate, where this graph shows a positive then a negative relationship, where the positive shock

of stability of the production price for natural gas by changing PPI will lead to a positive response in Discount Rate, and this states that an increase in the price of production will economically lead to a decrease of CPI that leads to an increase of Discount Rate.

Graph 6 shows how the change in the producer Price Index for

Natural Gas affects Broad money, where this graph shows a positive then a negative relationship, where the positive shock of stability of the production price for natural gas by changing PPI will lead to a positive response in broad money, and this states that an increase in the price of production will economically lead to a decrease of CPI that leads to an increase of broad money.

Graph 7 shows how the change in the Consumer Price Index for
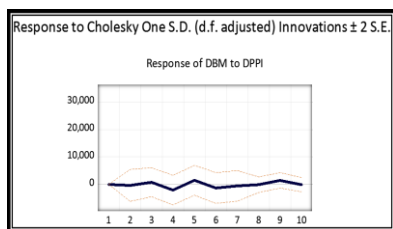
affecting Discount Rate, where this graph shows a positive relationship, where the positive shock of stability of consumer price for by changing interest rate will lead to a positive response in Discount Rate.

Variance Decomposition of Monetary Policy Variables on Price Stability Variables

Variance Decomposition of DDR:				
Period	S.E.	DDR	DBM	DCPI	DPPI
1	0.489891	100.0000	0.000000	0.000000	0.000000
2	0.504188	94.40932	0.004124	5.559891	0.026668
3	0.507123	93.89422	0.186951	5.522171	0.396656
4	0.523125	88.93596	1.714363	8.270724	1.078953
5	0.531403	86.94778	1.739957	10.26459	1.047672
6	0.545345	85.34302	3.601706	9.814428	1.240846
7	0.558732	82.71471	5.772808	9.349948	2.162538
8	0.559704	82.64862	5.844123	9.350544	2.156710
9	0.560310	82.60534	5.887590	9.333546	2.173526
10	0.561233	82.40418	5.993250	9.358047	2.244520
Variance Decomposition of DBM:				
Period	S.E.	DDR	DBM	DCPI	DPPI
1	35383.09	14.85895	85.14105	0.000000	0.000000
2	35536.25	14.94259	85.02597	0.021294	0.010147
3	36392.01	14.92320	84.06002	0.959586	0.057202
4	36721.28	15.72892	82.65659	1.236655	0.377842
5	37854.45	14.92898	83.38798	1.166737	0.516302
6	38562.79	16.83456	81.34683	1.203384	0.615218
7	39975.36	15.71940	82.55995	1.129983	0.590661
8	40179.11	15.61388	82.56962	1.231379	0.585125
9	40366.65	15.60391	82.45378	1.232646	0.709663
10	40470.04	15.54592	82.52055	1.226772	0.706750

▪ **Source: Calculated by the Researcher Using E-views, Edition 11**

Table 2 firstly, referred to above presents the result of the variance decomposition of monetary policy variables on price

stability variables. In the short run at month 3, the shock to Discount Rate accounts for the following 93.89 percent variation of the fluctuation in Discount Rate (own shock). Shock to Broad money can cause 0.18 percent fluctuation in Discount Rate and innovation to CPI can cause 5.52 percent fluctuation in Discount Rate then, the impulse to PPI can cause 0.39 percent fluctuation in Discount Rate. In the long run at month 10 shock to Discount Rate accounts for the following 82.40 percent variation of the fluctuation in Discount Rate (own shock). Shock to Broad money can cause 5.99 percent fluctuation in Discount Rate and innovation to CPI can cause 9.35 percent fluctuation in Discount Rate then, the impulse to PPI can cause 2.24 percent fluctuation in Discount Rate. Secondly, in the short run at month 3, the shock to Broad Money accounts for the following 84.06 percent variation of the fluctuation in Broad Money (own shock). Shock to Discount Rate can cause 14.92 percent fluctuation in Broad Money and innovation to CPI can cause 0.95 percent fluctuation in Broad Money then, the impulse to PPI can cause 0.05 percent fluctuation in Broad Money. In the long run at month 10 shock to Broad Money accounts for the following 82.52 percent variation of the fluctuation in Broad Money (own shock). Shock to Discount Rate can cause 15.54 percent fluctuation in Broad Money and innovation to CPI can cause 1.22 percent fluctuation in Broad Money then, the impulse to PPI can cause 0.70 percent fluctuation in Broad Money.

Variance Decomposition of Price Stability Variables on Monetary Policy Variables.

Variance Decomposition of DCPI:				
Period	S.E.	DDR	DBM	DCPI	DPPI
1	17.19909	0.014072	0.201797	99.78413	0.000000

2	17.25041	0.034957	0.482007	99.21002	0.273015
3	17.28059	0.039009	0.736664	98.87604	0.348286
4	17.28575	0.058854	0.771780	98.81991	0.349455
5	17.33631	0.143563	1.226653	98.28226	0.347528
6	17.77128	3.935727	2.165689	93.55652	0.342062
7	17.80192	3.922189	2.487731	93.24917	0.340909
8	17.82330	4.128791	2.481790	93.03758	0.351842
9	17.85623	4.161561	2.571133	92.86608	0.401228
10	17.87682	4.155580	2.639628	92.78540	0.419392
Variance Decomposition of DPPI:					
Period	**S.E.**	**DDR**	**DBM**	**DCPI**	**DPPI**
1	36.19316	0.000271	0.010364	22.52569	77.46368
2	36.52810	0.002352	0.243659	22.76879	76.98520
3	37.32454	1.890144	1.983247	22.32850	73.79811
4	37.42142	1.995062	2.278091	22.28538	73.44147
5	37.68630	2.087912	2.655328	22.38440	72.87236
6	40.97634	1.791484	17.46468	19.01552	61.72832
7	41.40568	2.797299	17.81279	18.73421	60.65569
8	41.62753	2.875221	17.72990	19.37722	60.01766
9	41.89546	3.252482	17.86321	19.28911	59.59520
10	42.14443	3.216715	18.58875	19.30121	58.89332

▪ **Source: Calculated by the Researcher Using E-views, Edition 11.**

Table 3 firstly, referred to above presents the result of the variance decomposition of monetary policy variables on price stability variables. In the short run at month 3, shock to CPI account for the following 98.87 percent variation of the fluctuation in CPI (own shock). Shock to Broad money can cause 0.73 percent fluctuation in CPI and innovation to Discount Rate can cause 0.03 percent fluctuation in CPI then,

the impulse to PPI can cause 0.34 percent fluctuation in CPI. In the long run at month 10 shock to CPI account for the following 92.78 percent variation of the fluctuation in CPI (own shock). Shock to Broad money can cause 2.63 percent fluctuation in CPI and innovation to Discount Rate can cause 4.15 percent fluctuation in CPI then, the impulse to PPI can cause 0.41 percent fluctuation in CPI. Secondly, in the short run at month 3, the shock to PPI accounts for the following 73.79 percent variation of the fluctuation in PPI (own shock). Shock to Discount Rate can cause 1.89 percent fluctuation in PPI and innovation to CPI can cause 22.32 percent fluctuation in PPI then, the impulse to Broad Money can cause 1.98 percent fluctuation in PPI. In the long run at month 10 shock to PPI accounts for the following 58.89 percent variation of the fluctuation in PPI (own shock). Shock to Discount Rate can cause 3.21 percent fluctuation in PPI and innovation to CPI can cause 19.30 percent fluctuation in PPI then, the impulse to Broad Money can cause 18.58 percent fluctuation in PPI.

14. Conclusion

The key point of the monetary policy affects the price stability by playing on the discount rate and broad money to respond on the interest rate finally that reflect on the price stability through the CPI and PPI.

VAR analysis was used, and then impulse response and variance decomposition were applied and the results show that a change in monetary policy affects the price stability, where this shows a positive and negative relationship, where the positive shock of both discount rate and broad money will lead to a negative response in interest rate, and this states that economically lead to an increase in CPI. where a positive and a negative shock of both discount rate and broad money will lead

to a negative and a positive response in CPI, and this states that economically lead to an increase and also decrease in PPI, cause the PPI to consider a short long index of inflation and that related to CPI.

15.Recommendations for research

The research recommends that work should be carried out periodically by the monetary authority, represented by the Central Bank, to conduct a periodic review of all economic variables through which it can affect price stability, thus increasing investment capacity. It should also be taken into consideration to use monetary policy to affect the resources available in Egypt. We find that The monetary policy that has been used in the Empirical Implementation of the money supply and the discount rate has a positive effect in the short term and then a negative effect in the long term on the PPI and that finally effectively in CPI.

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