Monetary Policy in Pakistan: The Role of Foreign Exchange and Credit Markets

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Introduction

❖ Credit markets in Pakistan are less developed and borrowing costs do not respond quickly and/or adequately to changes in policy interest rate.

❖ Financial markets in Pakistan are not well integrated with global financial markets.

❖ Examine the role of these frictions in influencing the effectiveness of monetary policy in Pakistan.

❖ Use a Dynamic Stochastic General Equilibrium (DSGE) model, which extends and modifies the standard version to incorporate features specific to Pakistan's economy (see Choudhri and Malik, 2014).

Plan of the Presentation

❖ Macroeconomic conditions in Pakistan

❖ Brief description of the model

❖ Effectiveness of monetary policy in Pakistan

❖ Concluding remarks

Current Economic Conditions

❖ Visible improvement in macroeconomic conditions in FY14

- Decline in inflation along with slowdown in monetary growth.

- Reduction in fiscal deficit.

- Increase in GDP growth led by industrial growth .

- Balance of payments position has improved accompanied by exchange rate stability.

Current Economic Conditions

❖ But challenges remain**:**

- Secular decline in real investment expenditures continues.

- Fiscal deficit is still high and public debt is rising.

- Private foreign inflows are still low compared to historic norms.
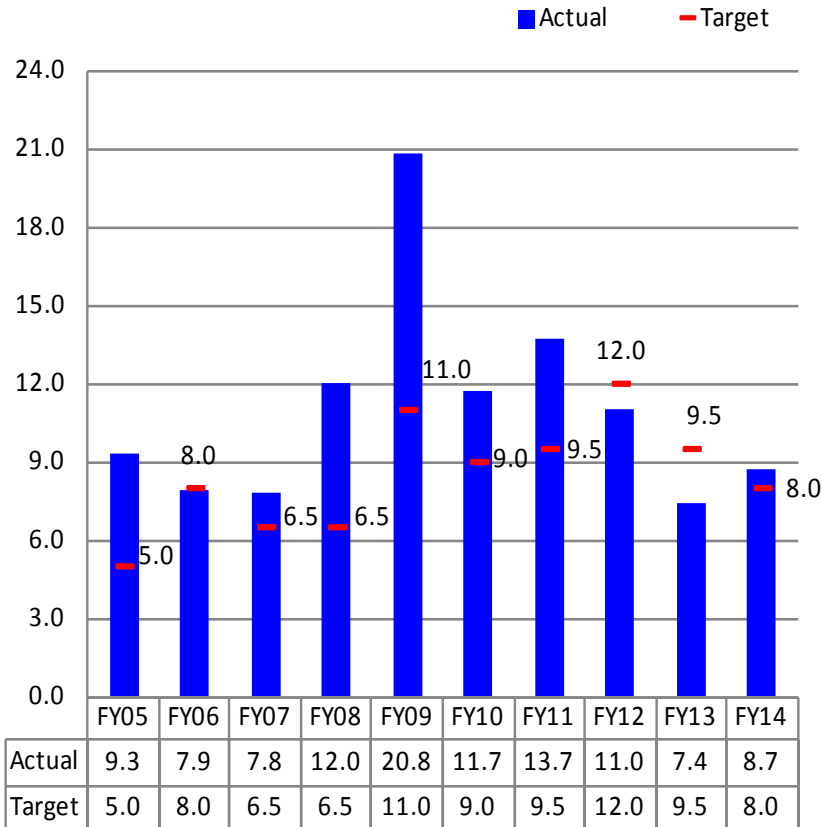
- Persistently high trade deficit.

❖ At the same time, severe energy shortages, dismal law and order and security issues, and poor economic governance have rendered the domestic economic environment least conducive for productive activities.

❖ Developments in the global economy are not that encouraging either from the perspective of international commodity prices and trade and financial flows.
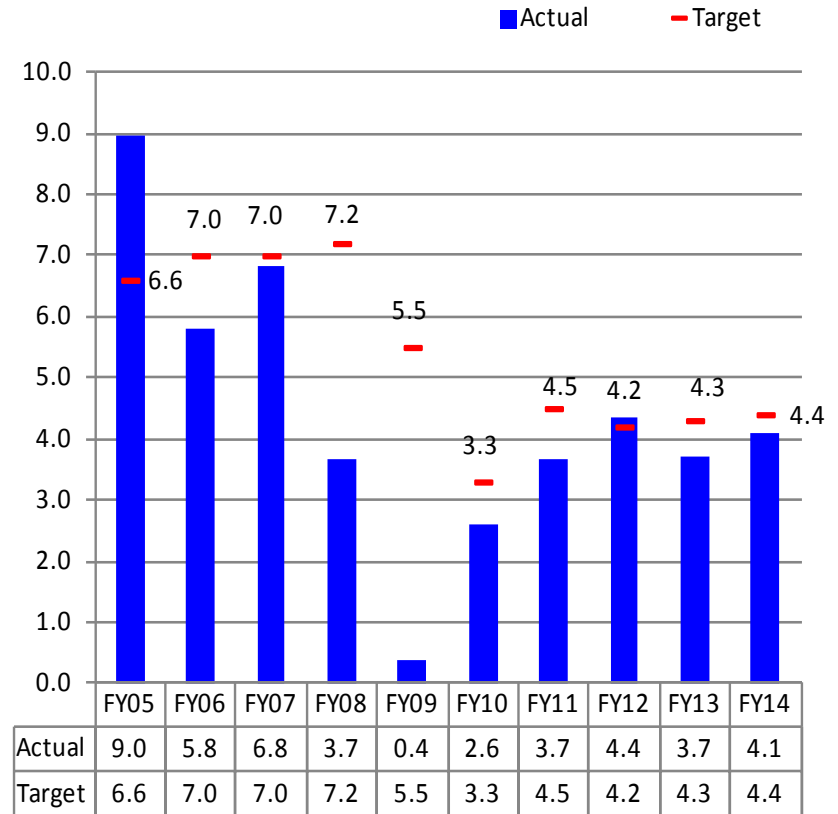
Inflation and growth performance in recent years


Average CPI Inflation (percent)

■ Actual ▬ Target

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14
Actual	9.3	7.9	7.8	12.0	20.8	11.7	13.7	11.0	7.4	8.7
Target	5.0	8.0	6.5	6.5	11.0	9.0	9.5	12.0	9.5	8.0

Real GDP Growth (percent)

■ Actual ▬ Target

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14
Actual	9.0	5.8	6.8	3.7	0.4	2.6	3.7	4.4	3.7	4.1
Target	6.6	7.0	7.0	7.2	5.5	3.3	4.5	4.2	4.3	4.4

Balance of payments position

External Current Account and Financial Inflows (bln $)

■ Current Account Deficit　■ Net Capital and Financial Inflows
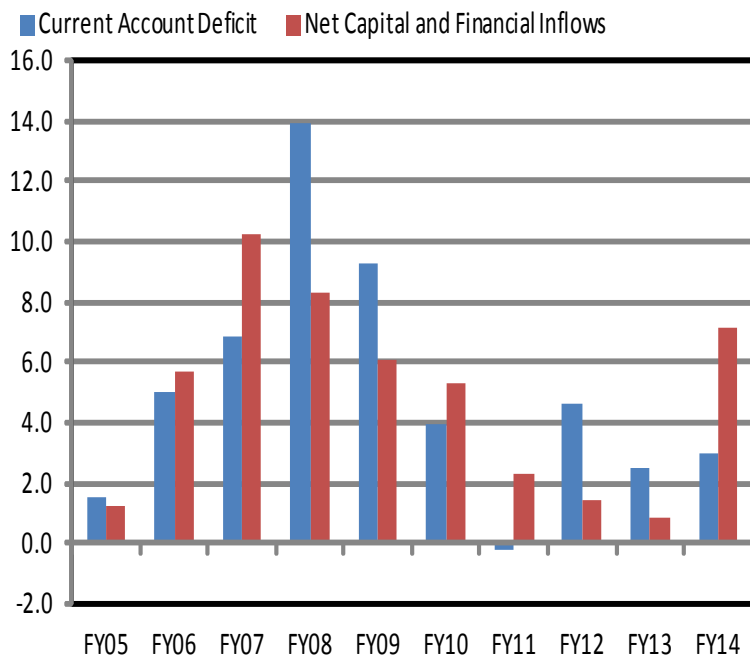
SBP's Foreign Exchange Reserves and Exchange Rate

— SBP's Forex Reserves　— End Month Rates (rhs)
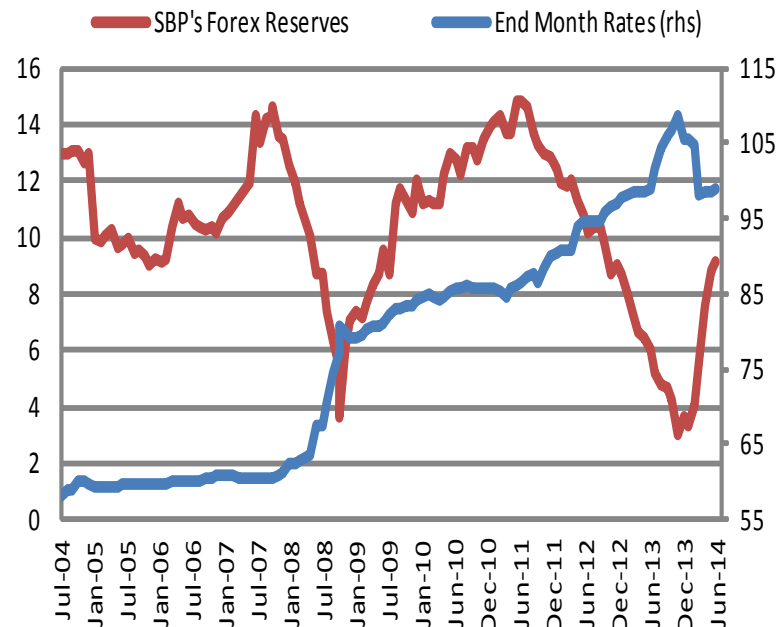
As % of GDP	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14
Current account deficit	3.9	4.8	8.5	5.7	2.2	-0.1	2.1	1.0	1.2
Net capital and financial inflows	4.5	7.2	5.0	3.8	3.0	1.1	0.6	0.3	2.9

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14
Depreciation	1.0	0.1	11.5	12.2	2.6	0.6	9.1	4.5	-0.3
Res. adq. ratio (no. of week)	16.0	16.4	12.9	15.6	21.9	22.8	14.0	7.9	11.4

Fiscal deficit and its financing

Fiscal Deficit and Debt

Legend:
- Fiscal deficit (target)
- Fiscal deficit (actual)
- Total Debt and Liabilities (Rhs)

E = FY14 actual fiscal deficit number is estimated

Government Borrowing (outstanding stock)

Legend:
- From SBP
- From scheduled banks
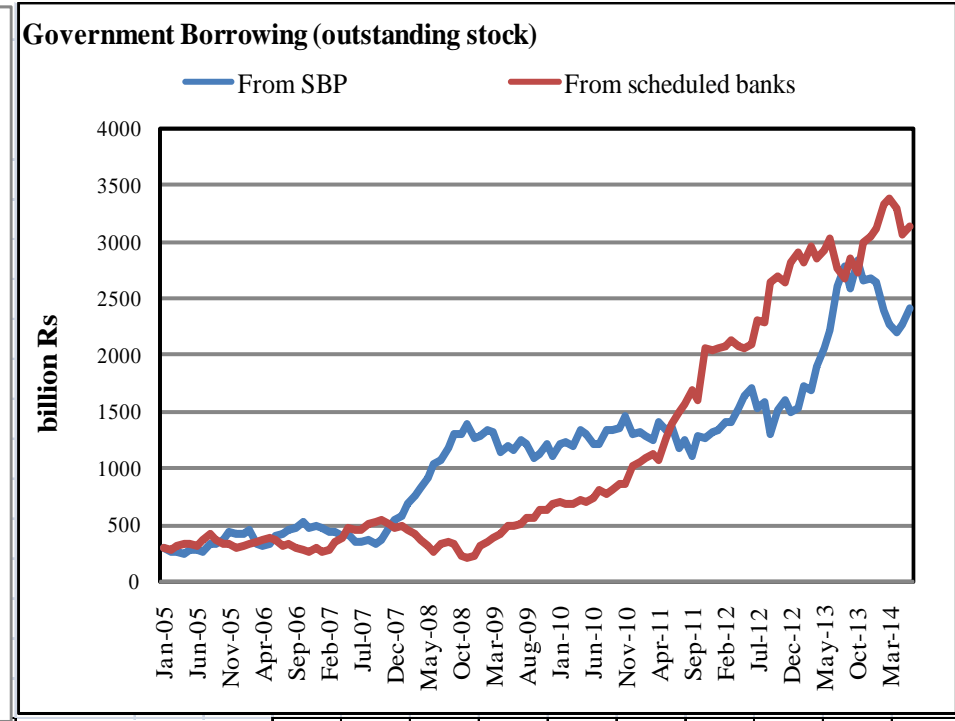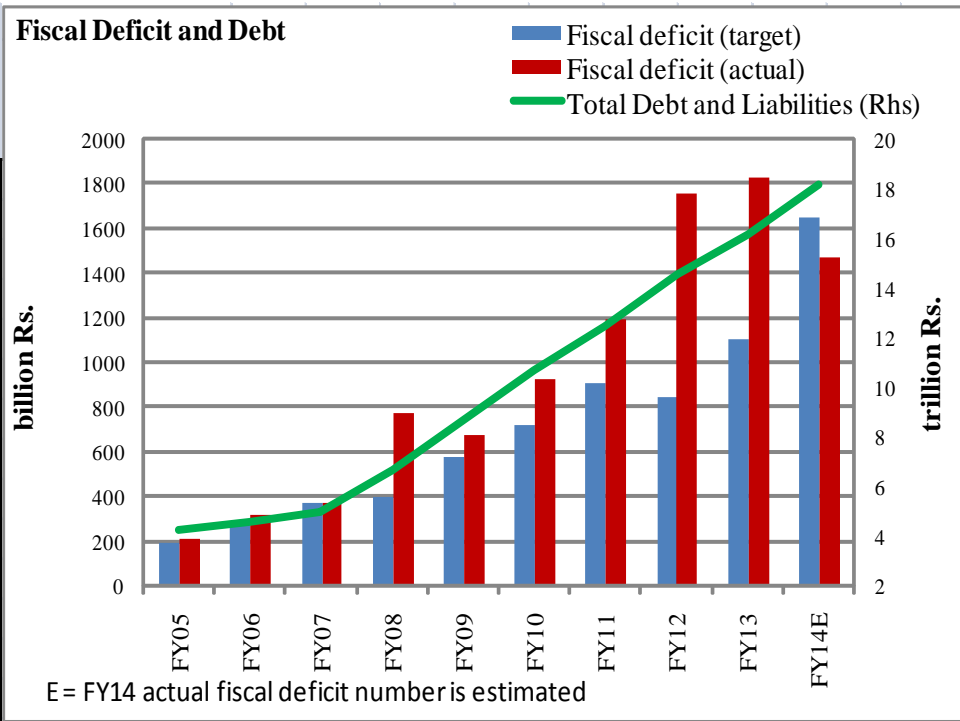
As percent of GDP	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14
Fiscal deficit (target)	3.0	4.2	4.2	4.0	4.7	4.9	4.0	4.0	4.7	6.3
Fiscal deficit (actual)	3.3	4.3	4.4	7.6	5.3	6.3	6.6	8.5	8.0	5.8
Total debt and Liabiliti	66.0	60.1	58.2	62.9	66.3	72.0	68.5	72.4	72.1	71.6

Year on Year growth	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14
Banking system	3.1	31.8	3.4	60.9	27.5	17.9	42.0	36.9	38.1	5.8
SBP	137.8	50.3	-14.5	199.6	12.7	3.8	13.8	24.0	29.7	8.9
Scheduled banks	-29.8	16.5	22.6	-42.4	84.8	51.3	87.7	49.5	44.9	3.5

Changes in Policy Rate and Inflation

Reverse repo rate (LHS) — Repo rate (LHS) — CPI Inflation (YoY) (RHS)
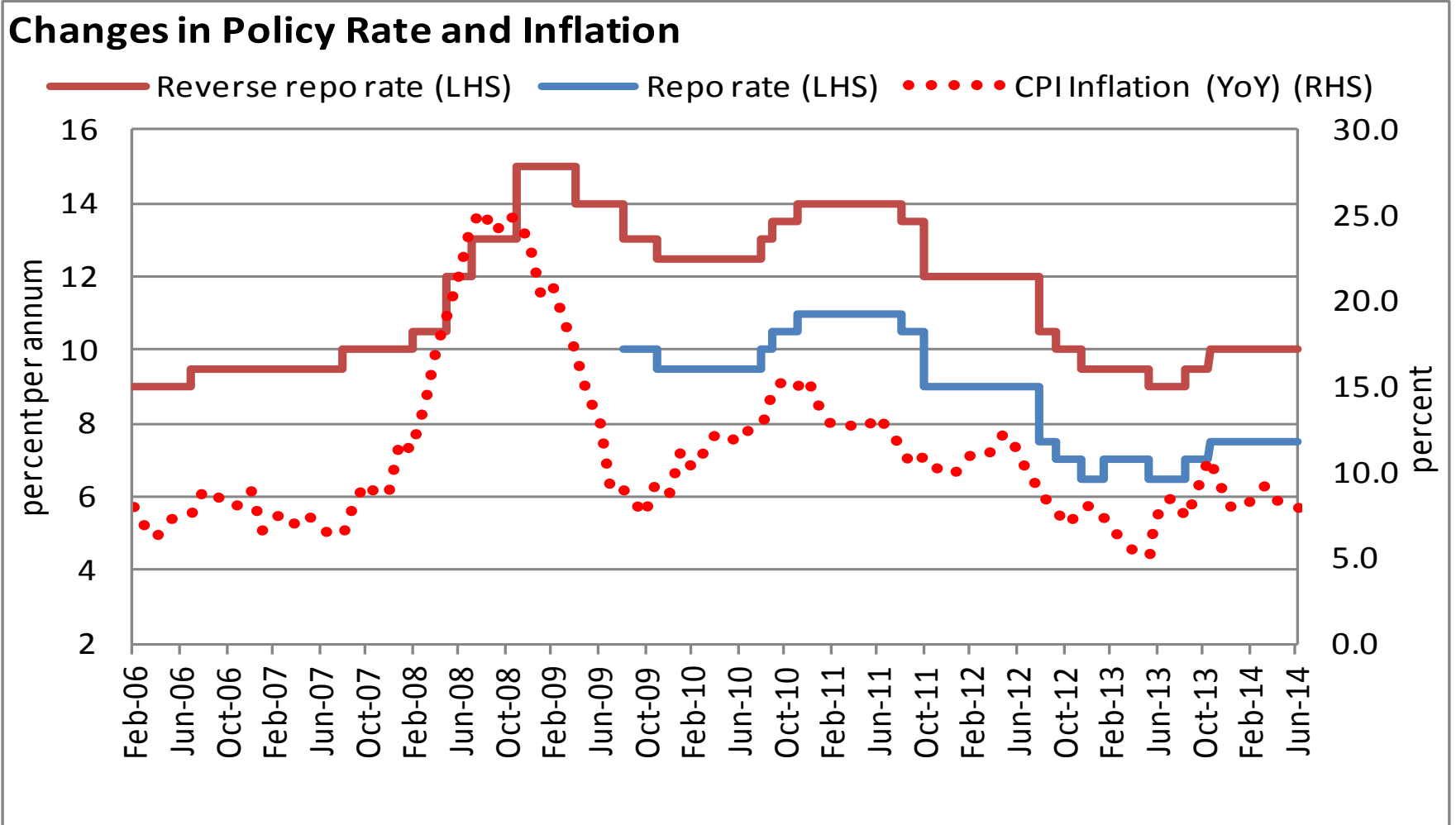
Brief description and key variations in the model

❖ The model is based on the New Keynesian framework that is widely used at central banks and international agencies.

❖ To incorporate credit market frictions, we introduce inertia in setting the rate on bank loans (that are used to finance investment).

- This variation accounts for low pass-through from policy rate to interest rate on bank loans (Mishra et al., 2010 discuss pass-through evidence for a number of low-income countries)

❖ To incorporate foreign exchange market frictions, introduce transactions costs that increase as international borrowing /lending increases.

Other variations from the standard model

❖ To capture inertia in expectation formation, we introduce a combination of forward and backward looking expectations of inflation and exchange rate depreciation.

❖ Two types of households:

  High-income households (who participate in the financial market).

  Low-income households (who do not interact with financial markets and are liquidity constrained).

❖ Prices assumed to be less sticky than wages (as suggested by studies on frequency of wage--price change in Pakistan).

Monetary Policy Rule

❖ SBP, like most central banks, uses interest rate control to implement its policy.

❖ In the model, we assume that the interest rate is changed systematically in response to inflation deviations from target and other variables.

❖ Also assume that SBP intervenes in the foreign exchange market to stabilize the exchange rate.

❖ In Pakistan, fiscal authorities announce an inflation target.

❖ Since the fiscal authority continues to borrow from SBP to finance its deficits, money growth generated by borrowing constrains the government's inflation target.

❖ Initially assume that the government takes responsibility for debt control.

Transmission of Monetary Policy Effects

❖ The real interest rate represents the key channel for the transmission of monetary policy effects.

❖ Higher real interest rate:

1. decreases consumption by increasing the real return on saving.

2. reduces investment by increasing the real cost of borrowing.

3. decreases exports and increases imports by causing a real appreciation (assuming international capital mobility).

❖ Aggregate demand decreases leading to lower output and inflation.

❖ Key factors that reduce monetary policy effectiveness in Pakistan.

1.   Inertia in expectations could weaken the link between nominal and real interest rates.

2.   Real borrowing cost may not fully adjust to real interest rate changes because of credit market frictions.

3.   Exchange rate stabilization by SBP may block the real exchange rate channel.

❖ To illustrate the differences between Pakistan and developed countries, compare the effects in:

1.   the model for monetary policy analysis in Pakistan (MPAP) with features relevant for Pakistan.

2.   the standard model with features suitable for developed countries.

❖ To explore monetary policy effectiveness, examine the dynamic effects of a temporary decrease in the interest rate.

    -     Specifically, the interest rate is lowered by 1 % (annual rate) in quarter 1

❖ Except for this shock, monetary policy follows a rule with weak response to inflation and moderate interest rate smoothing.

❖ Inflation target is 10% (annual CPI inflation).

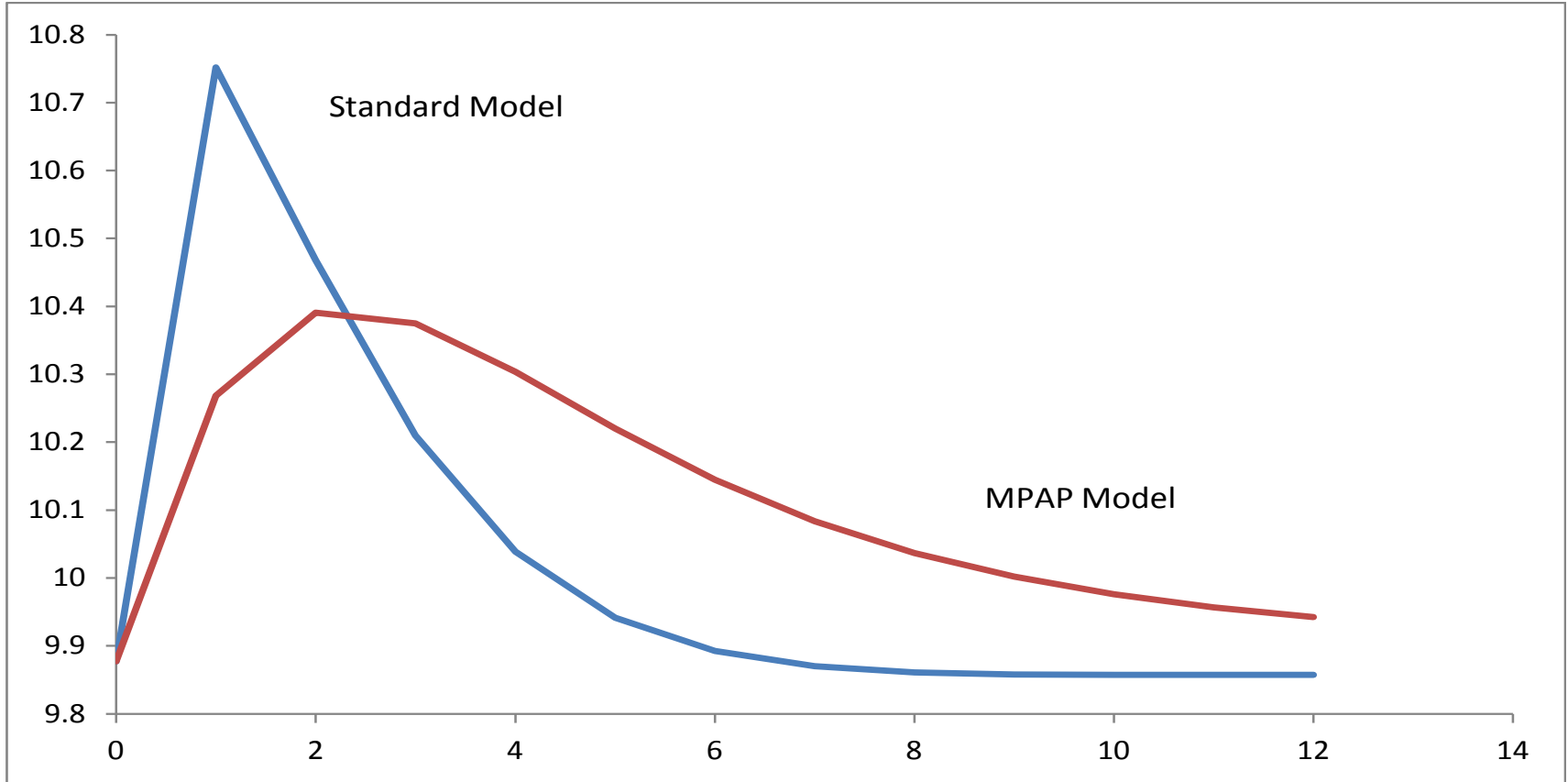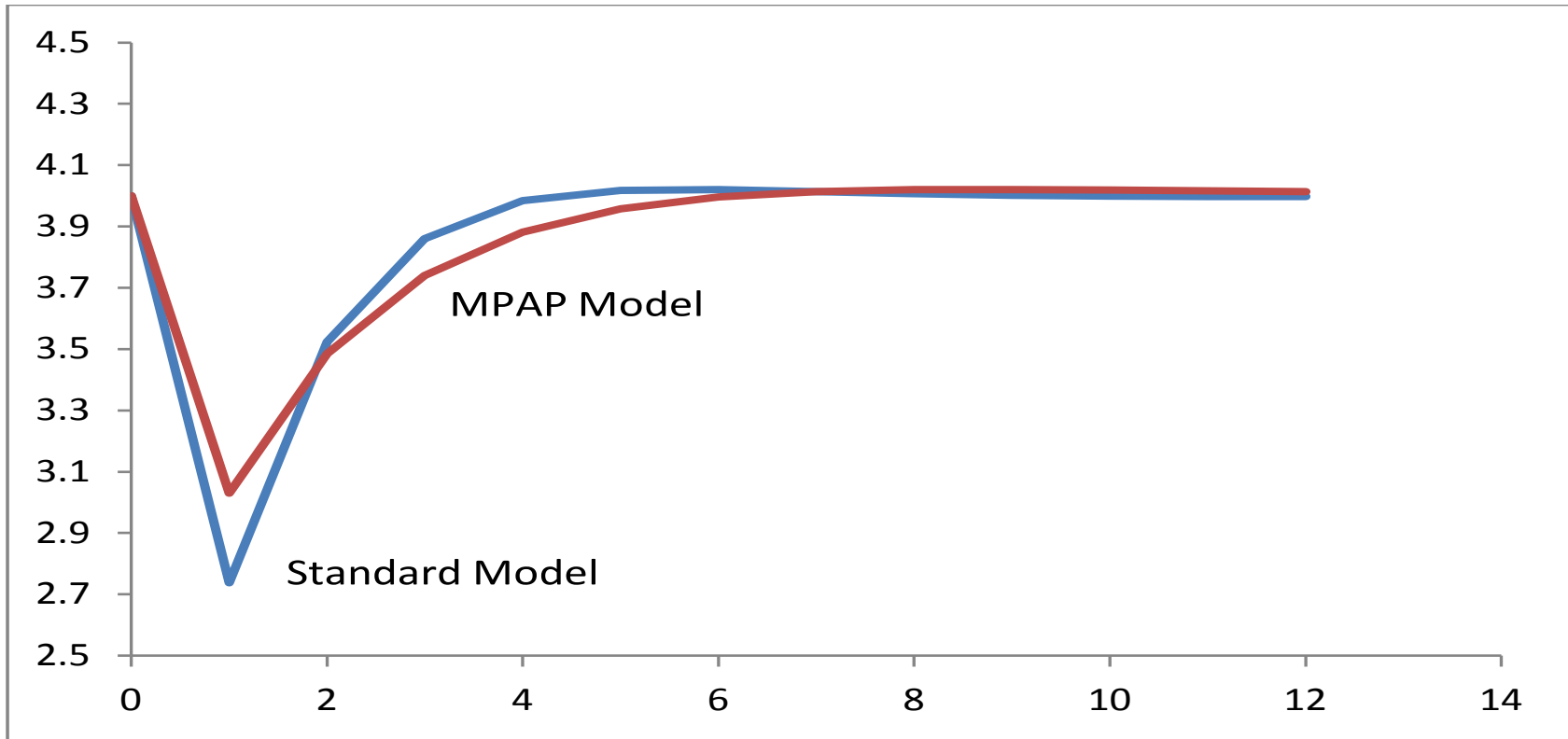❖ Fiscal policy slowly adjusts taxes to stabilize debt at 60% of potential output.
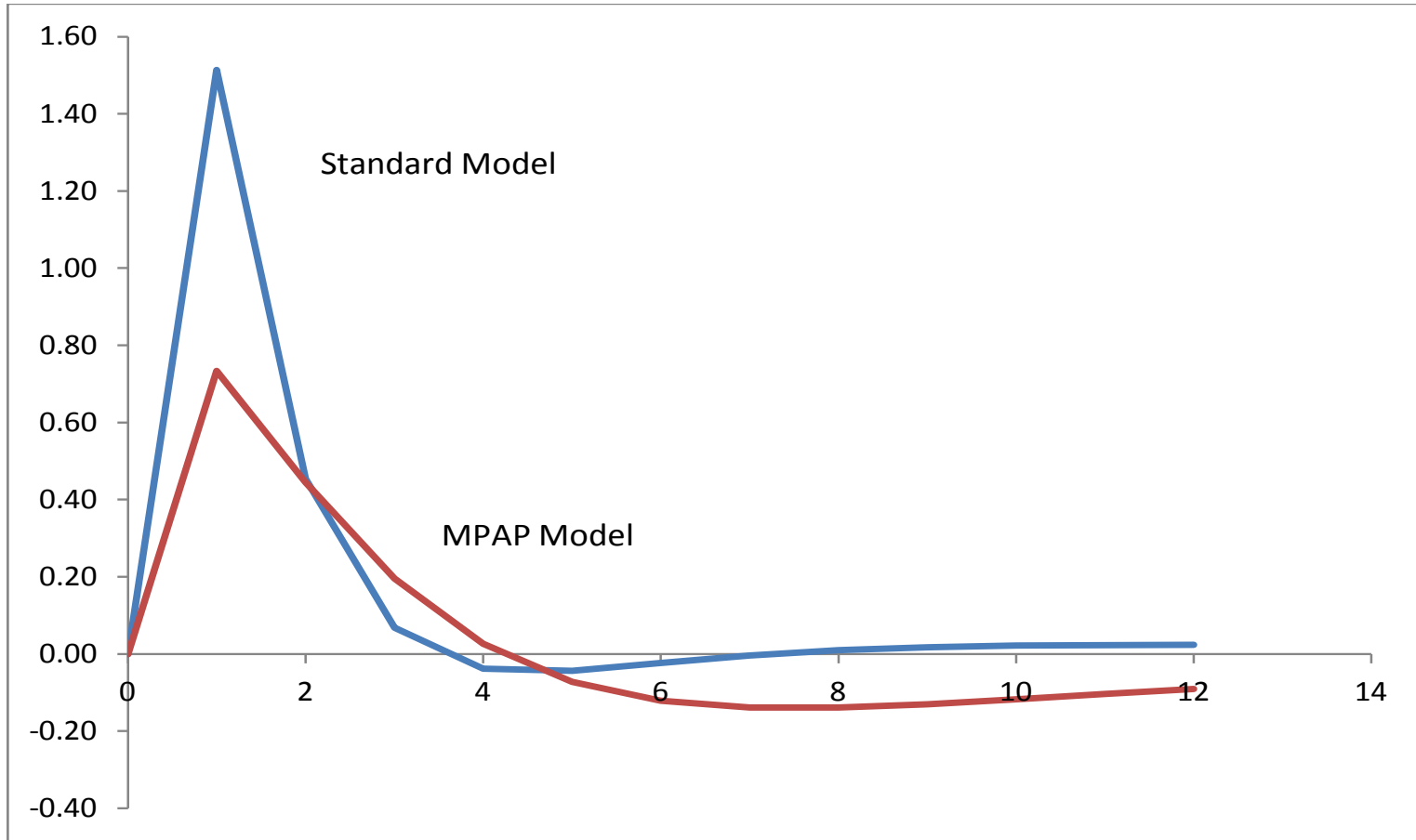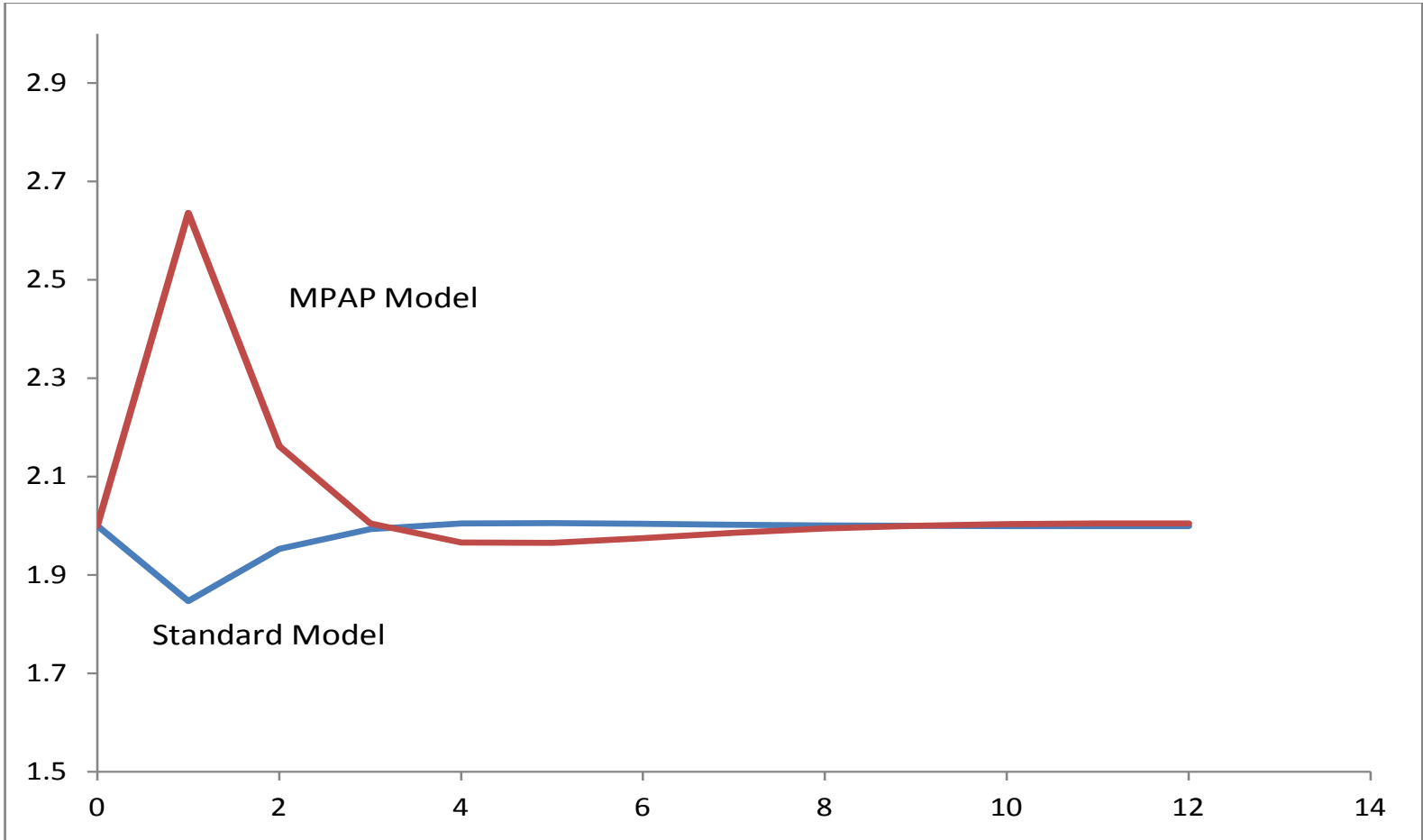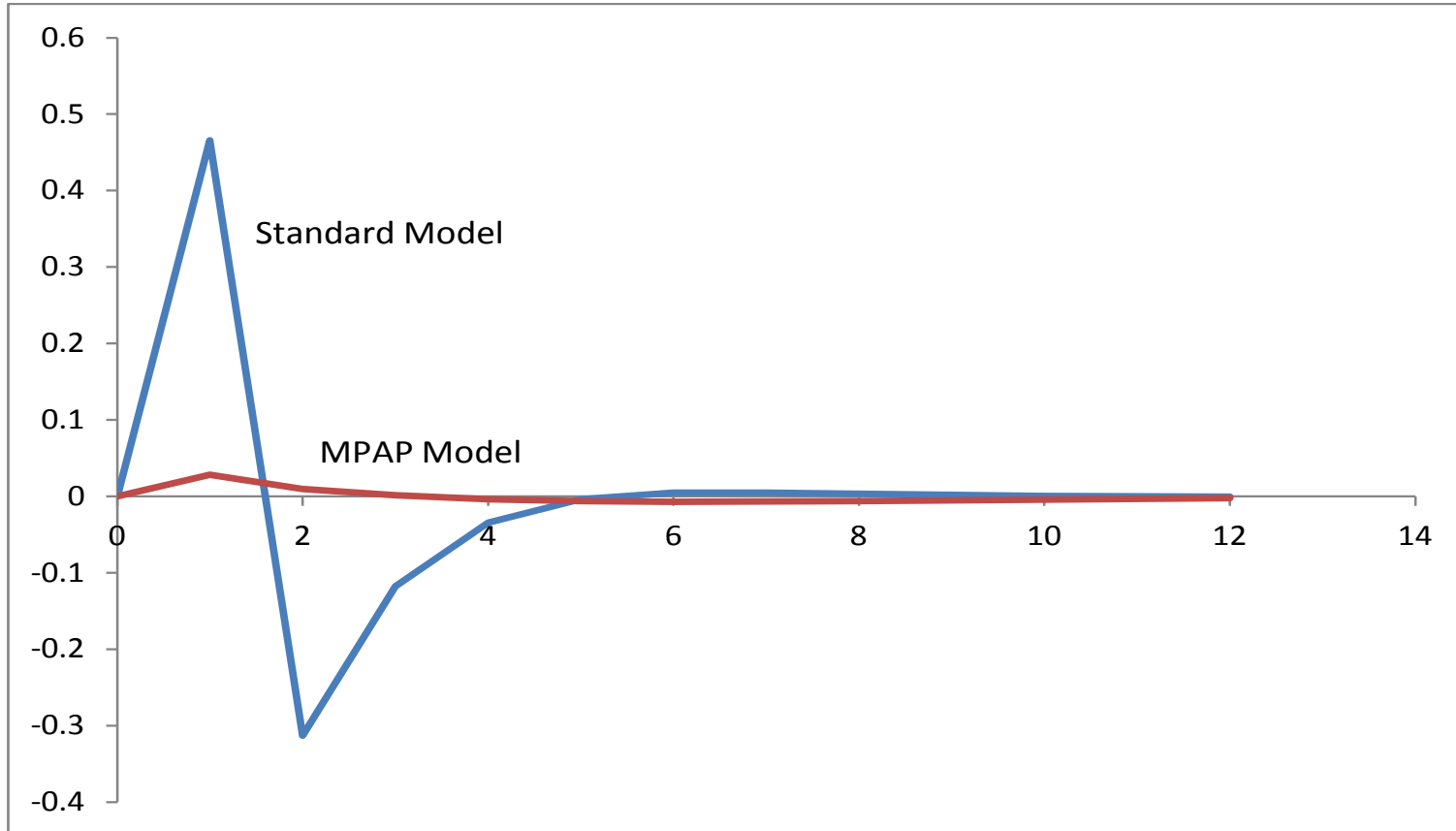
Some key results and concluding remarks

❖ Interest rate changes have a weaker impact on inflation and output gap in Pakistan.

❖ Estimates of interest rate rule in Pakistan suggest that the inflation coefficient is low (around 0.15).

❖ Stochastic simulations of the model suggest that a larger coefficient could help reduce inflation variability.

❖ Fiscal authorities need to adjust taxes and/or expenditures to control debt levels. Without fiscal adjustment to control debt, the rate of borrowing would keep on increasing, making it infeasible to control inflation.

❖ If government does not control debt, central bank could attempt to stabilize it. (Benigno and Woodford, 2006, Kumhof et al. , 2008).

❖ In a previous project (Choudhri and Malik, 2012), we explored a policy rule where SBP adjusts interest rates to control debt. This policy would lead to high and volatile inflation and cause large welfare losses.

❖ Concerns about the central bank's ability to keep both long term debt and inflation at target levels could lead to credibility problems which would further worsen economic conditions.

❖ Macroeconomic performance and the ability of SBP to control inflation can be improved considerably if fiscal policy takes the responsibility to stabilize debt.

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