Econometrics II - Problem Set 1

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Question 1

The results can be seen below.

Table 1:

	Dependent variable:			
	GDP Growth			
	(1)	(2)	(3)	(4)
lag(Gdp, 1)	0.323***	0.368***	0.282**	0.373***
	(0.114)	(0.111)	(0.121)	(0.109)
lag(Gdp, 2)	0.230**	0.264**	0.195*	0.273**
	(0.110)	(0.110)	(0.117)	(0.107)
lag(Exchange, 1)	−0.591		−1.497	
	(0.401)		(2.051)	
lag(Exchange, 2)			0.751	
			(2.122)	
lag(Ipc, 1)		0.0003	−0.0004	
		(0.001)	(0.001)	
lag(Ipc, 2)		−0.001	−0.001	
		(0.001)	(0.001)	
Constant	2.490***	1.777**	3.200***	1.625**
	(0.883)	(0.746)	(1.085)	(0.665)
Predictions	0.96	2.7	0.72	2.57
MSE	23.43	43.24	21.19	41.55
Observations	76	76	76	76
R^2	0.333	0.318	0.349	0.313
Adjusted R^2	0.305	0.279	0.292	0.294
Residual Std. Error	3.382 (df = 72)	3.444 (df = 71)	3.414 (df = 69)	3.409 (df = 73)
Note:				*p<0.1; **p<0.05; ***p<0.01

Via the MSE, we can see that the model generates the best prediction is ... .

Question 2

Question 3

Question 4

Question 5

Question 6

Item 1.

The results, for each model, can be seen below.

Table 2:

	Dependent variable:		
	Gdp	Exchange	Ipc
Gdp.l1	0.286^{**}	0.0004	-17.594^{*}
	(0.111)	(0.007)	(9.427)
Exchange.l1	-1.303^{***}	1.076^{***}	-58.666^{*}
	(0.393)	(0.026)	(33.215)
Ipc.l1	-0.002^{*}	0.0001^{*}	0.633^{***}
	(0.001)	(0.0001)	(0.087)
const	4.565^{***}	-0.011	180.756^{**}
	(0.872)	(0.058)	(73.708)
Predictions	-3.27	5.54	-49.88
MSE	0.37	0.15	3080.06
Observations	78	78	78
R^2	0.329	0.968	0.523
Adjusted R^2	0.302	0.966	0.503
Residual Std. Error (df = 74)	3.463	0.232	292.812
Note:			*p<0.1; **p<0.05; ***p<0.01

Table 3:

	Dependent variable:		
	Gdp	Exchange	Ipc
Gdp.l1	0.275^{**}	0.003	-18.497^{*}
	(0.121)	(0.008)	(10.233)
Exchange.l1	-1.741	1.388^{***}	-188.445
	(2.050)	(0.138)	(173.314)
Ipc.l1	-0.001	0.0002^{*}	0.709^{***}
	(0.001)	(0.0001)	(0.119)
Gdp.l2	0.187	0.002	-13.008
	(0.117)	(0.008)	(9.906)
Exchange.l2	0.831	-0.327^{**}	110.565
	(2.131)	(0.143)	(180.089)
Ipc.l2	-0.001	-0.0001	-0.173
	(0.001)	(0.0001)	(0.117)
const	3.349^{***}	-0.033	284.222^{***}
	(1.083)	(0.073)	(91.529)
Predictions	-3.2	5.83	-192.04
MSE	0.47	0.45	39069.89
Observations	77	77	77
R^2	0.371	0.970	0.557
Adjusted R^2	0.317	0.967	0.519
Residual Std. Error (df = 70)	3.429	0.230	289.802
Note:			*p<0.1; **p<0.05; ***p<0.01

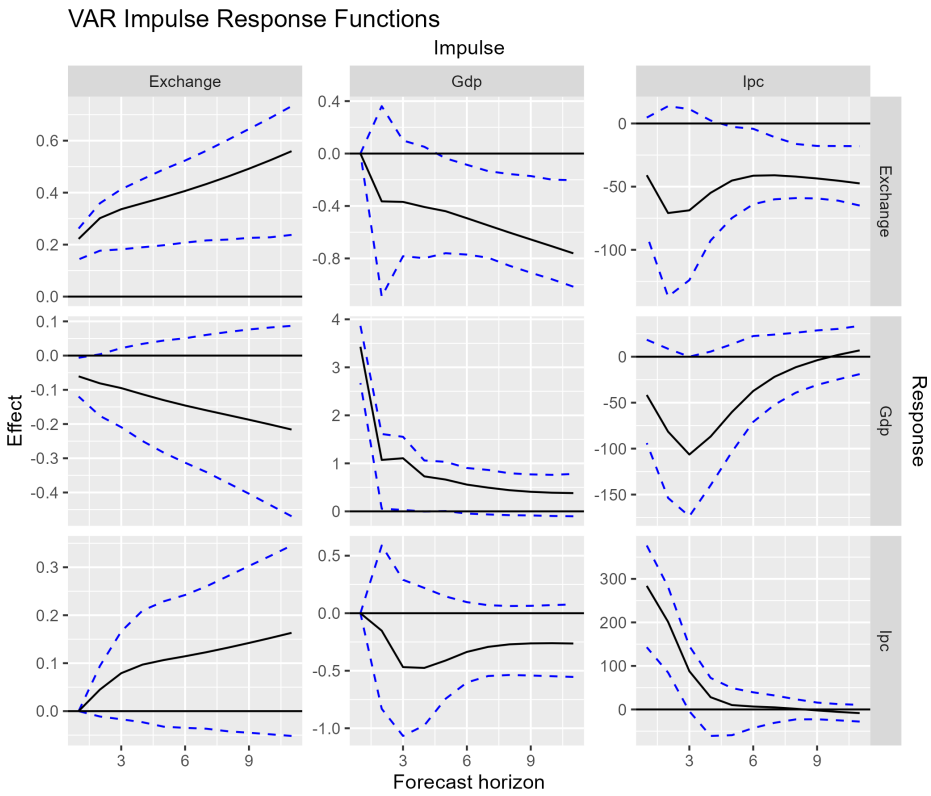
Table 4:

	Dependent variable:		
	Gdp	Exchange	Ipc
Gdp.l1	0.264**	0.004	−11.850
	(0.129)	(0.009)	(9.520)
Exchange.l1	−1.691	1.371***	−92.022
	(2.188)	(0.146)	(161.592)
Ipc.l1	−0.001	0.0001	0.804***
	(0.001)	(0.0001)	(0.110)
Gdp.l2	0.222*	0.004	−14.736
	(0.131)	(0.009)	(9.677)
Exchange.l2	0.497	−0.243	−183.420
	(3.540)	(0.236)	(261.494)
Ipc.l2	−0.001	−0.00004	−0.567***
	(0.002)	(0.0001)	(0.135)
Gdp.l3	−0.046	−0.011	2.075
	(0.124)	(0.008)	(9.132)
Exchange.l3	0.279	−0.085	223.376
	(2.278)	(0.152)	(168.295)
Ipc.l3	−0.0004	−0.00004	0.493***
	(0.001)	(0.0001)	(0.107)
const	3.459***	0.015	210.551**
	(1.288)	(0.086)	(95.145)
Predictions	-3.12	5.79	-136.03
MSE	0.58	0.4	20064.38
Observations	76	76	76
R^2	0.374	0.971	0.665
Adjusted R^2	0.288	0.967	0.620
Residual Std. Error (df = 66)	3.510	0.234	259.277
Note:			*p<0.1; **p<0.05; ***p<0.01

Item 2.

The order was ..., because ... .

The IRFs can be seen below.



About credibility, the results show that ... .