



## Overview

**1. Objectives**

**2. Specification of Model**

**3. Justification**

**4. Possible Impacts**

**5. Estimation Technique**

**6. Source**

**8. Results**

**9. Conclusion**

# ◆ Objectives

## ■ Objectives

Specification

Justification

Possible Impact

Measurement

Estimation

Source

Results

Conclusion

To explain the variation in Nifty Bank

Used various Macroeconomic variables like GDP and Foreign Investment

To find the variables which can affect Nifty Bank like lags

Nifty Bank is taken as Dependent variable from year 2001 to 2021

Made 3 models on different specification like price and return



## ◆ Specification

Objectives

■ Specification

Justification

Possible Impact

Measurement

Estimation

Source

Results

Conclusion

The specification of our time series econometric model is:

$$Y_t = \alpha_0 + \alpha_1 Y_{t-1} + \alpha_2 Y_{t-2} + \alpha_3 Y_{t-3} + \alpha_4 Y_{t-4} + \dots$$

Where:  $Y_t$  = Price of Bank NIFTY

The specification of our ARDL econometric model is:

$$Y_t = \alpha_0 + \alpha_1 Y_{t-1} + \alpha_2 X_{1t} + \alpha_3 X_{1t-1} + \alpha_4 X_{2t} + \dots$$

Where:  $X_{1t}$  = GDP at current price

$X_{2t}$  = Foreign Investment Inflows

# ◆ Justification

Objectives

Specification

Justification

Possible Impact

Measurement

Estimation

Source

Results

Conclusion

**Independent Variables:**  
GDP at current price and  
Foreign investment are  
taken independent  
variable

GDP at current Price  
will be positively  
correlated to Nifty  
Bank

Foreign Investment  
is directly related to  
Nifty Bank

Lags of Nifty Bank  
will also affect the  
current level.

Return and Price  
are used in different  
model of Nifty Bank



# ◆ Model-1

Objectives

Specification

Justification

Possible Impact

Measurement

Estimation

Source

Results

Conclusion

```
. reg niftybankclosing gdpcurrentlakhcrores foreigninvestmentinflows
```

Source	SS	df	MS	Number of obs =	21
Model	1.9069e+09	2	953436985	F( 2, 18) =	211.32
Residual	81212350.5	18	4511797.25	Prob > F =	0.0000
Total	1.9881e+09	20	99404316	R-squared =	0.9592
				Adj R-squared =	0.9546
				Root MSE =	2124.1

niftybankclosing	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
gdpcurrentlakhcrores	140.8195	10.64079	13.23	0.000	118.464	163.175
foreigninvestmentinflows	.0600014	.0305024	1.97	0.065	-.0040817	.1240845
_cons	-2695.677	894.0868	-3.02	0.007	-4574.084	-817.2702

After regressing as usual, we find that both the dependent variables are significant at 10% significance level.

# ◆ Model-1

Objectives

Specification

Justification

Possible Impact

Measurement

■ Estimation

Source

Results

Conclusion

```
. estat hettest
```

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of niftybankclosing

chi2(1) = 2.05

Prob > chi2 = 0.1523

```
. vif
```

Variable	VIF	1/VIF
foreigninv~s	1.96	0.509793
gdpcatcurre~s	1.96	0.509793
Mean VIF	1.96	

We have tested for heteroskedasticity and Multicollinearity. Both are not present in the model

# ◆ Model-1

Objectives

```
21 . tsset time, yearly
      time variable:  time, 1 to 21
      delta: 1 year
```

Specification

```
22 . varsoc niftybankclosing
```

Justification

Selection-order criteria

Sample: 5 - 21

Number of obs

=

17

lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-179.112				9.3e+07	21.1896	21.1945	21.2386
1	-162.454	33.316	1	0.000	1.5e+07	19.3475	19.3572	19.4455
2	-158.856	7.1949*	1	0.007	1.1e+07	19.0419	19.0565	19.1889
3	-157.181	3.3509	1	0.067	1.0e+07*	18.9624*	18.9819*	19.1585*
4	-156.343	1.6762	1	0.195	1.0e+07	18.9815	19.0059	19.2266

Possible Impact

Measurement

Endogenous: niftybankclosing

Exogenous: \_cons

■ Estimation

Source

Results

Conclusion

We have checked the lag length of every variable by varsoc and got the lag of nifty\_bank as 3, GDP at current price as 2 and foreign investment inflows as 3

# ◆ Model-1

Objectives

Specification

Justification

Possible Impact

Measurement

```
. pperron niftybankclosing , regress lags(3)
```

Phillips-Perron test for unit root

Number of obs = 20

Newey-West lags = 3

	Test Statistic	1% Critical Value	Interpolated Dickey-Fuller 5% Critical Value	10% Critical Value
Z(rho)	1.040	-17.200	-12.500	-10.200
Z(t)	1.018	-3.750	-3.000	-2.630

MacKinnon approximate p-value for Z(t) = 0.9945

niftybankclosing	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
niftybankclosing L1.	1.014152	.0837877	12.10	0.000	.8381208	1.190184
_cons	1355.357	1205.419	1.12	0.276	-1177.134	3887.848

We have performed Phillips-perron for all the variables and all of them comes out to be non-stationary

Source

Results

Conclusion

Estimation



# ◆ Model-1

Objectives

Specification

Justification

Possible Impact

Measurement

Estimation

Source

Results

Conclusion

```
. predict ul,res
```

```
. estat dwatson
```

```
Durbin-Watson d-statistic( 3, 21) = 1.172235
```

```
. varsoc u
```

Selection-order criteria

Sample: 5 - 21

Number of obs = 17

lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-154.812				5.4e+06	18.3308	18.3357	18.3798
1	-153.267	3.0898	1	0.079	5.0e+06*	18.2667*	18.2764*	18.3647*
2	-152.882	.77039	1	0.380	5.4e+06	18.339	18.3536	18.4861
3	-152.823	.11779	1	0.731	6.1e+06	18.4497	18.4692	18.6458
4	-152.293	1.0604	1	0.303	6.5e+06	18.505	18.5294	18.7501

Endogenous: ul

Exogenous: \_cons

We have regressed the model and calculated residual and calculated lag length by varsoc of residual

# ◆ Model-1

Objectives

Specification

Justification

Possible Impact

Measurement

Estimation

Source

Results

Conclusion

```
. pperron u, regress lags(1)
```

Phillips-Perron test for unit root

Number of obs = 20

Newey-West lags = 1

	Test Statistic	Interpolated Dickey-Fuller		
		1% Critical Value	5% Critical Value	10% Critical Value
Z (rho)	-11.099	-17.200	-12.500	-10.200
Z (t)	-2.645	-3.750	-3.000	-2.630

MacKinnon approximate p-value for Z(t) = 0.0840

	u1	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
	u1						
	L1.	.4117737	.2177818	1.89	0.075	-.0457688	.8693163
	_cons	15.2781	433.9047	0.04	0.972	-896.3218	926.878

We have performed Phillips-perron for the residual and it comes out to be stationary, hence the model is cointegrated

# ◆ Model-1

Objectives

Specification

```
. var niftybankclosing gdpactcurrentlakhcrores foreigninvestmentinflows, lags(1/2)
```

Vector autoregression

Justification

Sample:	3 - 21	No. of obs	=	19
Log likelihood	= -393.6735	AIC	=	43.64984
FPE	= 2.03e+15	HQIC	=	43.8265
Det(Sigma_ml)	= 1.99e+14	SBIC	=	44.69369

Possible Impact

Measurement

Equation	Parms	RMSE	R-sq	chi2	P>chi2
niftybankclosing	7	1579.66	0.9825	1063.811	0.0000
gdpactcurrentla~s	7	3.68362	0.9976	7864.689	0.0000
foreigninvestm~s	7	15733.3	0.6275	32.00087	0.0000

■ Estimation

Source

Results

Conclusion

We performed vector autoregression to get the dependence on each other

# ◆ Model-1

Objectives

Specification

Justification

Possible Impact

Measurement

Estimation

Source

Results

Conclusion

	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
<b>niftybankclosing</b>						
niftybankclosing						
L1.	-.211306	.1762613	-1.20	0.231	-.5567718	.1341597
L2.	.4793918	.2138971	2.24	0.025	.0601612	.8986225
gdpatcurrentlakhcrores						
L1.	1117.755	226.0131	4.95	0.000	674.7775	1560.733
L2.	-1019.33	246.7606	-4.13	0.000	-1502.972	-535.6882
foreigninvestmentinflows						
L1.	-.0900976	.0302241	-2.98	0.003	-.1493357	-.0308595
L2.	-.1659399	.0336041	-4.94	0.000	-.2318028	-.1000771
_cons	152.9655	710.7975	0.22	0.830	-1240.172	1546.103
<b>gdpatcurrentlakhcrores</b>						
niftybankclosing						
L1.	-.0006707	.000411	-1.63	0.103	-.0014763	.0001348
L2.	-.0006864	.0004988	-1.38	0.169	-.001664	.0002912
gdpatcurrentlakhcrores						
L1.	2.598264	.5270393	4.93	0.000	1.565286	3.631243
L2.	-1.523573	.5754204	-2.65	0.008	-2.651376	-.39577
foreigninvestmentinflows						
L1.	.0000337	.0000705	0.48	0.632	-.0001044	.0001718
L2.	.0000933	.0000784	1.19	0.234	-.0000603	.0002469
_cons	-1.087677	1.657507	-0.66	0.512	-4.336331	2.160977
<b>foreigninvestmentinflows</b>						
niftybankclosing						
L1.	-3.425311	1.75554	-1.95	0.051	-6.866107	.0154845
L2.	5.16642	2.130388	2.43	0.015	.9909359	9.341905
gdpatcurrentlakhcrores						
L1.	2903.515	2251.062	1.29	0.197	-1508.485	7315.516
L2.	-3008.663	2457.704	-1.22	0.221	-7825.675	1808.349
foreigninvestmentinflows						
L1.	.1387432	.3010279	0.46	0.645	-.4512607	.7287472
L2.	-.4626481	.3346929	-1.38	0.167	-1.118634	.193338
_cons	13355.95	7079.454	1.89	0.059	-519.5275	27231.42

# ◆ Model-1

Objectives

Specification

Justification

Possible Impact

Measurement

■ Estimation

Source

Results

Conclusion

```
. vargranger
```

Granger causality Wald tests

Equation		Excluded	chi2	df	Prob > chi2
niftybankclosing	gdpatcurrentlak~s		<b>58.728</b>	<b>2</b>	<b>0.000</b>
niftybankclosing	foreigninvestme~s		<b>33.497</b>	<b>2</b>	<b>0.000</b>
niftybankclosing		ALL	<b>64.376</b>	<b>4</b>	<b>0.000</b>
gdpatcurrentlak~s	niftybankclosing		<b>7.8654</b>	<b>2</b>	<b>0.020</b>
gdpatcurrentlak~s	foreigninvestme~s		<b>1.6557</b>	<b>2</b>	<b>0.437</b>
gdpatcurrentlak~s		ALL	<b>9.0802</b>	<b>4</b>	<b>0.059</b>
foreigninvestme~s	niftybankclosing		<b>6.9233</b>	<b>2</b>	<b>0.031</b>
foreigninvestme~s	gdpatcurrentlak~s		<b>1.8342</b>	<b>2</b>	<b>0.400</b>
foreigninvestme~s		ALL	<b>15.356</b>	<b>4</b>	<b>0.004</b>

In this Granger Causality test, we find that Bank Nifty depends on both GDP and Foreign investment. It also has feedback effect.

# ◆ Model-1

Objectives

Specification

Justification

Possible Impact

Measurement

■ Estimation

Source

Results

Conclusion

```
. vecrank niftybankclosing gdpactcurrentlakhcrores foreigninvestmentinflows , trend(constant)
```

Johansen tests for cointegration

Trend: constant

Number of obs = 19

Sample: 3 - 21

Lags = 2

maximum rank	parms	LL	eigenvalue	trace statistic	5% critical	
					value	
0	12	-428.37859	.	69.4102	29.68	
1	17	-402.11451	0.93700	16.8821	15.41	
2	20	-394.37364	0.55728	1.4003*	3.76	
3	21	-393.67348	0.07105			

We have performed Johansen tests for cointegration and found the maximum rank to be 2.

# ◆ Model-1

```
. vec niftybankclosing gdpatcurrentlakhcrores foreigninvestmentinflows , trend(constant) rank(2)
```

Vector error-correction model

Sample: 3 - 21

No. of obs = 19

AIC = 43.61828

HQIC = 43.78653

SBIC = 44.61242

Log likelihood = -394.3736

Det(Sigma\_ml) = 2.15e+14

Equation	Parms	RMSE	R-sq	chi2	P>chi2
D_niftybankclo~g	6	1526.69	0.8784	93.92942	0.0000
D_gdpatcurrent~s	6	3.55766	0.9277	166.8777	0.0000
D_foreigninves~s	6	15641.6	0.6996	30.27766	0.0000

		Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
D_niftybankclosing	_ce1						
	L1.	-.8050802	.1771478	-4.54	0.000	-1.152283	-.4578769
	_ce2						
	L1.	114.496	19.62174	5.84	0.000	76.03805	152.9539
niftybankclosing	LD.						
		-.4343116	.2331546	-1.86	0.062	-.8912863	.0226631
gdpatcurrentlakhcrores	LD.						
		919.1877	156.2335	5.88	0.000	612.9757	1225.4
foreigninvestmentinflows	LD.						
		.1576374	.0349119	4.52	0.000	.0892113	.2260635
	_cons						
		-.0060636	781.0709	-0.00	1.000	-1530.877	1530.865

Objectives

Specification

Justification

Possible Impact

Measurement

Estimation

Source

Results

Conclusion



# ◆ Model-1

Objectives

Specification

Justification

Possible Impact

Measurement

■ Estimation

Source

Results

Conclusion

```
. vecldmar
```

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	<b>6.8127</b>	<b>9</b>	<b>0.65661</b>
2	<b>4.7239</b>	<b>9</b>	<b>0.85768</b>

H0: no autocorrelation at lag order

```
. vecnorm, jbera
```

Jarque-Bera test

Equation	chi2	df	Prob > chi2
D_niftybankclosing	<b>0.947</b>	<b>2</b>	<b>0.62281</b>
D_gdpatcurrentlakhcrores	<b>1.691</b>	<b>2</b>	<b>0.42927</b>
D_foreigninvestmentinflows	<b>0.176</b>	<b>2</b>	<b>0.91588</b>
ALL	<b>2.814</b>	<b>6</b>	<b>0.83179</b>

We find that there is no autocorrelation and the residual of variables are also normally distributed.



## ◆ Model-2

Objectives

**Step1:** Setting up the data

We have set time variables as weekly and estimated weekly returns of BankNIFTY.

Specification

**Step2:** Performing Dicky-Fuller Test without trend

The model in here comes to be stationary. Results of regression are

Justification

Possible Impact

Measurement

D.ret	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ret						
L1.	-.92841	.0727607	-12.76	0.000	-1.071942	-.7848778
_cons	.0143403	.0067931	2.11	0.036	.0009398	.0277408

Estimation

Source

Results

Both Drift and lags here come to be significant.

Conclusion

## ◆ Model-2

Objectives

Specification

Justification

Possible Impact

Measurement

■ Estimation

Source

Results

Conclusion

**Step3:** Performing Varsoc to check for lags

We have got a lag as 0, hence no need of augmented Dicky-Fuller Test.

**Step4:** Performing Phillips Perron Test without trend

The model here again comes to be stationary.

**Step5:** Performing DF-GLS test

Using Schwert criterion criteria, max lag length comes to be 14. All the lags too in here are stationary.

***Note: After performing all the tests, we can conclude as the return rate of nifty is stationary at 5% level of Significance.***

## ◆ Model-2

Objectives

Specification

Justification

Possible Impact

Measurement

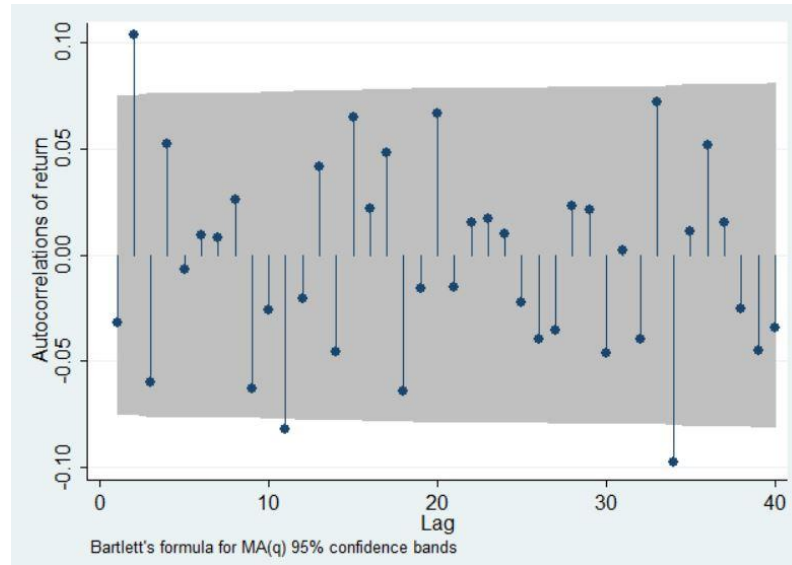
■ Estimation

Source

Results

Conclusion

**Step6:** Estimating for AC and PAC to determine p and q of ARIMA model  
Using Correlogram estimation, we have estimated for AC and PAC values at different lags.



Now to predict for q, autocorrelation coefficient comes to be 3 using the given above graph

## ◆ Model-2

Objectives

Specification

Justification

Possible Impact

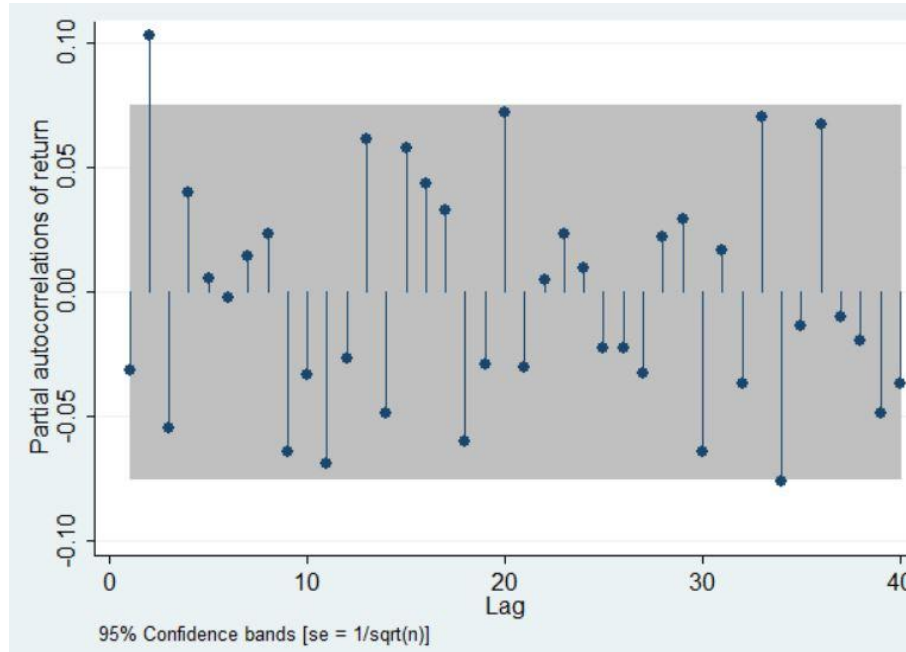
Measurement

Estimation

Source

Results

Conclusion



Now, further using Partial Correlation, p values come to be 2 using the given above graph.

Hence the final Model for ARIMA time series regression comes as ARIMA (2,0,3).

## ◆ Model-2

### Step7: ARIMA (2,0,3) results

Finally, using ARIMA model, regression results comes as:

ARIMA regression

```
Sample: 1960w2 - 1973w6                Number of obs   =      681
                                         Wald chi2(5)      =     143.32
Log likelihood = 1177.395                Prob > chi2       =      0.0000
```

return	Coef.	OPG Std. Err.	z	P> z	[95% Conf. Interval]	
return						
_cons	.0033527	.0017006	1.97	0.049	.0000196	.0066857
ARMA						
ar						
L1.	-1.086086	.29294	-3.71	0.000	-1.660238	-.5119345
L2.	-.5747967	.187767	-3.06	0.002	-.9428133	-.2067801
ma						
L1.	1.065181	.2924443	3.64	0.000	.4920008	1.638361
L2.	.6367779	.1829438	3.48	0.001	.2782147	.9953411
L3.	.0033553	.0488095	0.07	0.945	-.0923095	.0990201
/sigma	.0429433	.0007612	56.41	0.000	.0414513	.0444354

## ◆ Model-2

Objectives

Specification

Justification

Possible Impact

Measurement

■ Estimation

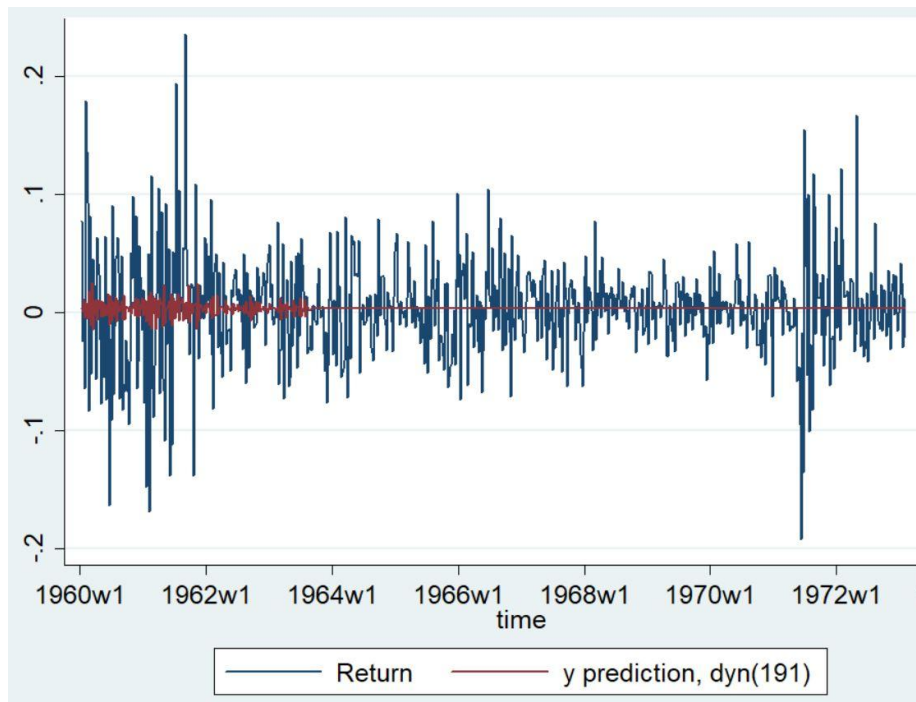
Source

Results

Conclusion

### Step8: Prediction Results

Now, moving toward predictions. We have regressed over past data. The model is limited to catching drift and can not predict the fluctuations arising.



# ◆ Model-3

Objectives

Specification

Justification

Possible Impact

Measurement

■ Estimation

Source

Results

Conclusion

**Step1:** Setting up the data

We have set time variables as yearly and estimated monthly prices of BankNIFTY.

**Step2:** Performing Stationary Test with trend for Price

While performing the Dicky-Fuller Test, the model is non-stationary. Using varsoc we got lag to be 2. Further performing Augmented Dicky-Fuller Test and Philips Perron Test, the model again comes non-stationary.

***Note: After performing all the tests, we can conclude that Price of Bank Nifty is non-stationary at 5% level of Significance***

## ◆ Model-3

Objectives

Specification

Justification

Possible Impact

Measurement

■ Estimation

Source

Results

Conclusion

### **Step3:** Generating Log of Price

We have generated a log of Price data using Price. Further we will perform a stationary test.

### **Step4:** Performing Dicky Fuller Test with trend

The model here comes to be stationary at 5% level of Significance.

### **Step5:** Performing Varsoc to calculate required lag length

The required lag length comes to be at 1.



## ◆ Model-3

Objectives

Specification

Justification

Possible Impact

Measurement

Estimation

Source

Results

Conclusion

**Step6:** Performing Argumented Dicky Fuller test at lag 1 with trend

The model here again comes to be stationary around the trend. Also, regression results have been added.

Augmented Dickey-Fuller test for unit root		Number of obs =		189
	Test Statistic	1% Critical Value	Interpolated Dickey-Fuller 5% Critical Value	10% Critical Value
Z (t)	-3.916	-4.010	-3.438	-3.138
MacKinnon approximate p-value for Z(t) = 0.0115				

D.lnprice	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
lnprice						
L1.	-.1428737	.0364802	-3.92	0.000	-.2148443	-.070903
LD.	.1364618	.072831	1.87	0.063	-.0072244	.280148
_trend	.0015059	.0004035	3.73	0.000	.0007098	.002302
_cons	1.223042	.3097515	3.95	0.000	.6119424	1.834141

We can see all the coefficients being significant other than LD of In Price at 5% level of significance.

## ◆ Model-3

Objectives

**Step7:** Performing Phillips Perron Test with trend

The model here again comes to be stationary. Regression results are:

Specification

```
Phillips-Perron test for unit root                Number of obs   =    190
                                                    Newey-West lags =     1
```

Justification

	Test Statistic	1% Critical Value	Interpolated Dickey-Fuller 5% Critical Value	10% Critical Value
Z(rho)	-26.497	-28.000	-21.060	-17.800
Z(t)	-3.721	-4.010	-3.438	-3.138

Possible Impact

MacKinnon approximate p-value for Z(t) = 0.0210

Measurement

lnprice	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
lnprice					
L1.	.8745326	.0354554	24.67	0.000	.8045887   .9444766
_trend	.0013268	.0003934	3.37	0.001	.0005507   .002103
_cons	1.076205	.3012113	3.57	0.000	.4819958   1.670414

Estimation

Source

**Step8:** Performing DF-GLS test

Using Schwert criterion criteria, max lag length comes to be 14. Most of the lags are significant here, hence indicating stationarity.

Results

Conclusion

***Note: After performing all the tests, we can conclude that the InPrice of Bank Nifty is stationary at 5% level of Significance***

## ◆ Model-3

Objectives

Specification

Justification

Possible Impact

Measurement

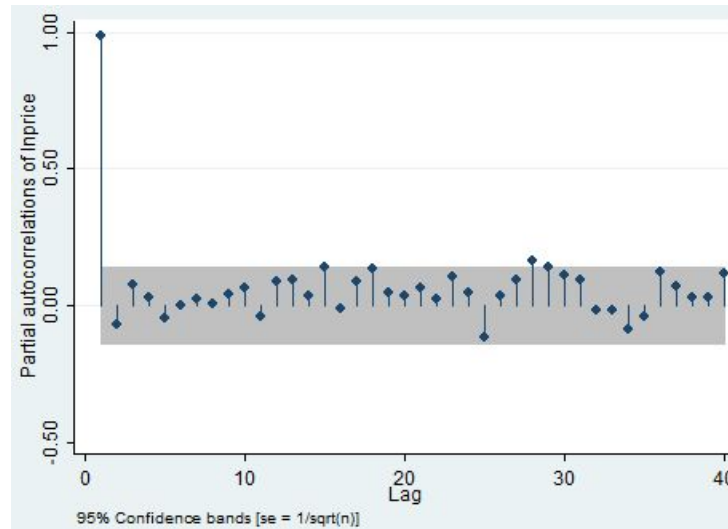
■ Estimation

Source

Results

Conclusion

**Step9:** Estimating for AC and PAC to determine p and q of ARIMA model  
Using Correlogram estimation, we have estimated for AC and PAC values at different lags.



Now to predict for p(AR), partial autocorrelation coefficient (PAC) comes to be 1 using the given below graph.

## ◆ Model-3

Objectives

Specification

Justification

Possible Impact

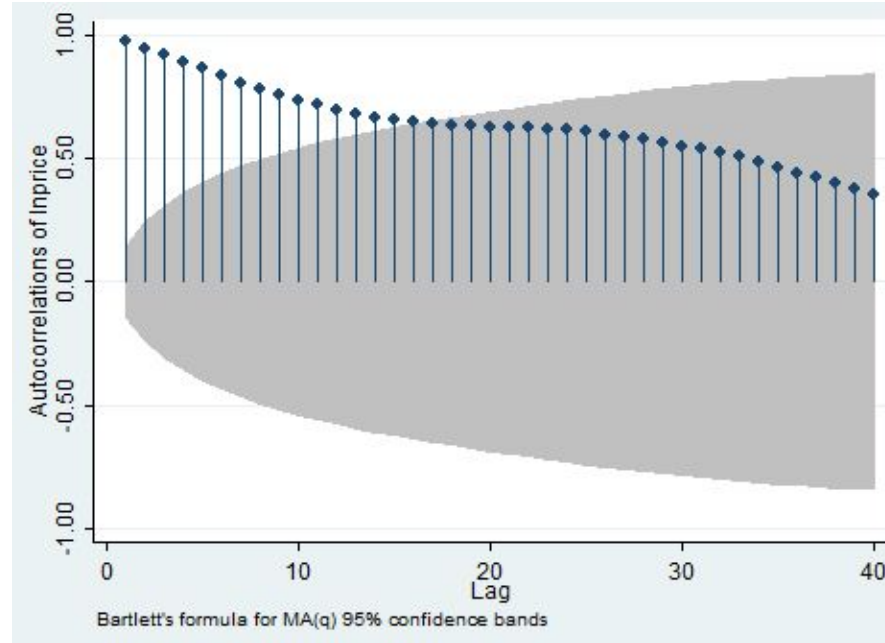
Measurement

Estimation

Source

Results

Conclusion



Now, further using Autocorrelation, q values come to be 1 using the given below graph. Major reason for taking it as 1 is because of the gradual decay indicative of an AR model.

***Hence, the final model comes to ARIMA (1,0,1)***

## ◆ Model-3

### Step10: ARIMA (1,0,1) results

Finally, using the ARIMA model, regression results are significant.

ARIMA regression

```
Sample: 1 - 0191      Number of obs   =      191
                      Wald chi2(3)      =     694.40
Log likelihood = 193.1642      Prob > chi2      =     0.0000
```

lnprice	OPG		z	P> z	[95% Conf. Interval]	
	Coef.	Std. Err.				
lnprice						
time	.0106747	.0008161	13.08	0.000	.0090751	.0122742
_cons	8.478929	.0819696	103.44	0.000	8.318272	8.639587
ARMA						
ar						
L1.	.8350043	.0377305	22.13	0.000	.7610538	.9089548
ma						
L1.	.1541392	.0660856	2.33	0.020	.0246137	.2836646
/sigma	.0876765	.0033982	25.80	0.000	.0810162	.0943368

We can observe the model is overall significant. Also, all the coefficients are significant at 5% level of significance.

# ◆ Model-3

Objectives

Specification

Justification

Possible Impact

Measurement

■ Estimation

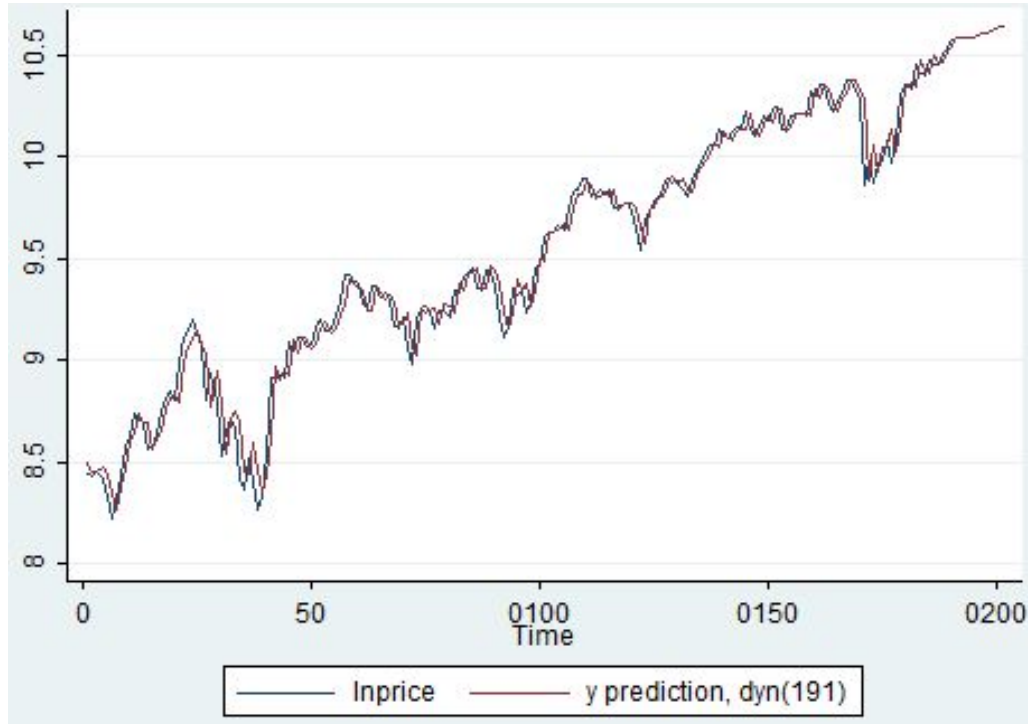
Source

Results

Conclusion

## Step11: Prediction Results

Now, moving toward predictions. We have first regressed over past data. Finally, forecasting, we have tried to see the trend of price movement for the coming year.



The predicted model fits perfectly with the data and hence possibly predicts good results for the trend. We can observe a slow growth in Bank Nifty price overcoming the time period.

## ◆ Source

Objectives

Specification

Justification

Possible Impact

Measurement

Estimation

■ Source

Results

Conclusion

All the data is taken from the website of National Stock Exchange and from the Reserve Bank of India. We have taken data from 2001 - 2021 of Price of Index Nifty Bank, GDP of India at current price and Foreign Investment.

# ◆ Results

## Model-1 : ARDL Results

Price of Nifty Bank  
depends on GDP and  
Foreign Investment

And the coefficients are  
positive indicating  
positive correlation

GDP and Foreign  
investment Granger  
Causes Nifty Bank price

There is no long run  
impact, but short run  
change in GDP and FI  
impacts change in price  
of Bank Nifty.

Objectives

Specification

Justification

Possible Impact

Measurement

Estimation

Source

Results

Conclusion



# ◆ Results

## Model-2 : Weekly Returns ARIMA Result

Weekly returns stationary  
without any trend

ARIMA model AR(2) with  
MA(3) process

Capturing the possible drift  
for returns

Direction of the moment of  
Price

Objectives

Specification

Justification

Possible Impact

Measurement

Estimation

Source

Results

Conclusion

# ◆ Results

## Model-3 : Monthly Price ARIMA Result

Objectives

Specification

Justification

Possible Impact

Measurement

Estimation

Source

Results

Conclusion

Price is non-stationary even around a trend

Log of Price comes to be stationary around a trend

ARIMA regression both AR & MA comes to be 1

Model's predicted values coincides neatly with the actual value

Trend line behaviour can be predicted

Returns for the next 12 months are slow

# ◆ Conclusion

Objectives

Specification

Justification

Possible Impact

Measurement

Estimation

Source

Results

Two types of models, one is a pure time series forecasting while the other is an Auto Distributed Lagged model

We can try to include more variables in the model like mutual funds or increase in demat accounts etc.

Covered many aspects of Regression and time series analysis

1

2

3

Thank You!