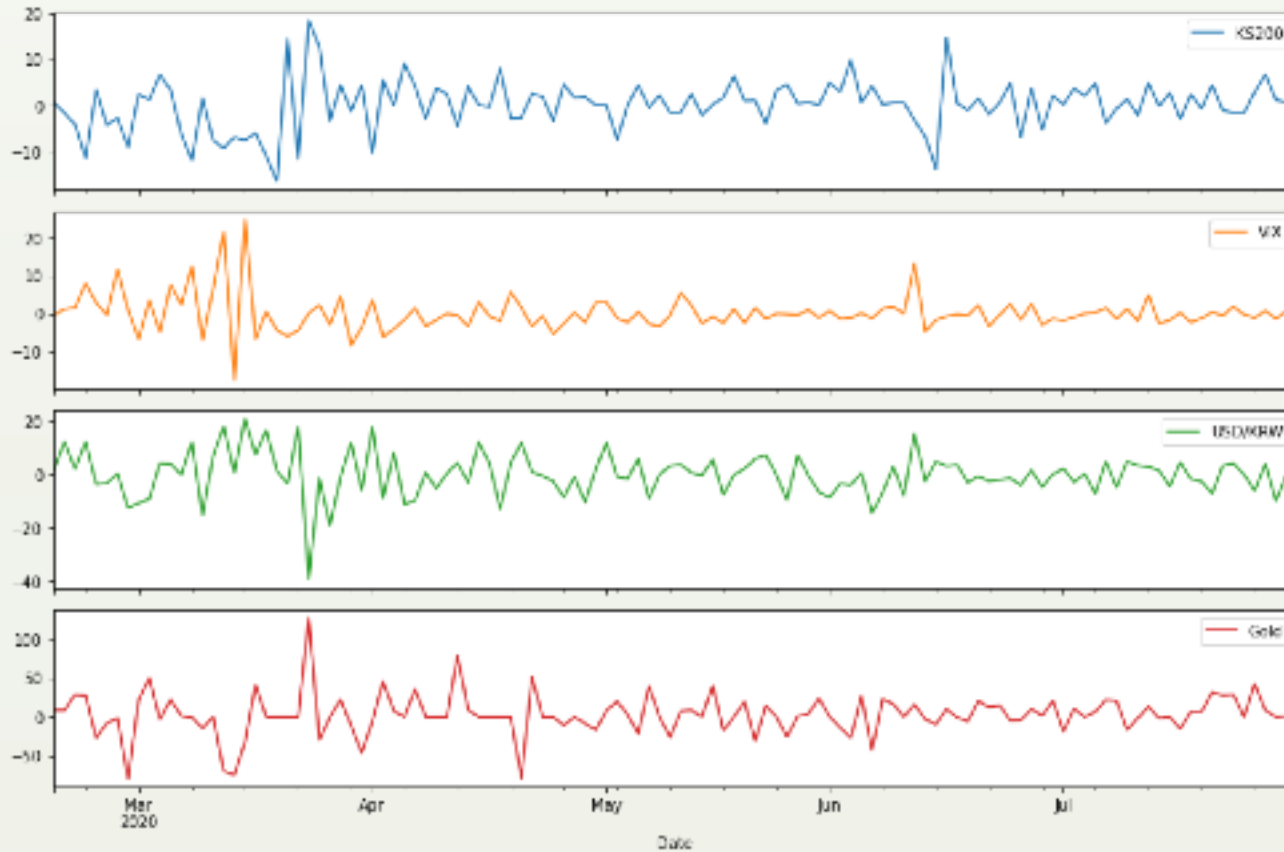


# VAR 모델

## ○ 차분



# VAR 모델

## Summary

```
# VAR 모형적합
df_use_return = df.diff(1).dropna()
fit = sm.tsa.VAR(df).fit(maxlags=2)
display(fit.summary())
```

Summary of Regression Results				
-----				
Model:	VAR			
Method:	OLS			
Date:	Sun, 01, May, 2022			
Time:	13:39:38			
-----				
No. of Equations:	4.00000	NIC:	17.5351	
Mobs:	116.000	HQIC:	17.0775	
log likelihood:	-1505.06	FPE:	1.75720e+07	
AIC:	16.6806	Det(Omega_mle):	1.30320e+07	
-----				
Results for equation KS200				
-----				
	coefficient	std. error	t-stat	prob
-----				
const	0.006380	0.401736	0.013	0.983
L1.KS200	-0.307310	0.308523	-2.032	0.005
L1.VIX	-0.366231	0.316233	-3.206	0.001
L1.USD/KRW	-0.127940	0.073825	-1.726	0.084
L1.Gold	0.027581	0.018035	1.480	0.132
L2.KS200	0.180541	0.302225	1.042	0.297
L2.VIX	-0.397603	0.315837	-3.432	0.001
L2.USD/KRW	-0.033736	0.075370	-0.448	0.654
L2.Gold	0.000340	0.018579	0.019	0.983
-----				
results for equation VIX				
-----				
	coefficient	std. error	t-stat	prob
-----				
const	0.229006	0.438275	0.523	0.601
L1.KS200	0.067280	0.090733	0.681	0.495
L1.VIX	0.302462	0.309327	2.920	0.004
L1.USD/KRW	0.105877	0.067185	1.576	0.115
L1.Gold	-0.014109	0.016954	-0.832	0.405
L2.KS200	0.076723	0.093002	0.825	0.409
L2.VIX	0.071917	0.305386	0.682	0.495
L2.USD/KRW	-0.018205	0.068370	-0.265	0.791
L2.Gold	-0.029951	0.016903	-1.772	0.075
-----				

	coefficient	std. error	t-stat	prob
const	0.070142	0.744225	0.094	0.925
L1.KS200	0.143805	0.167656	0.858	0.391
L1.VIX	-0.036481	0.176476	-0.207	0.836
L1.USD/KRW	-0.050974	0.114051	-0.447	0.655
L1.Gold	-0.020389	0.028789	-0.708	0.479
L2.KS200	-0.411788	0.157925	-2.607	0.009
L2.VIX	0.130264	0.178954	0.728	0.467
L2.USD/KRW	0.020993	0.116438	0.180	0.857
L2.Gold	-0.034268	0.028703	-1.194	0.233
-----				
Results for equation Gold				
-----				
	coefficient	std. error	t-stat	prob
-----				
const	3.936071	2.484055	1.584	0.113
L1.KS200	0.016776	0.559598	0.030	0.976
L1.VIX	-1.530801	0.589037	-2.599	0.009
L1.USD/KRW	0.396449	0.388678	1.041	0.298
L1.Gold	-0.086094	0.096093	-0.879	0.379
L2.KS200	0.943342	0.527119	1.790	0.074
L2.VIX	-1.287111	0.597307	-2.155	0.031
L2.USD/KRW	0.365632	0.388643	0.941	0.347
L2.Gold	-0.116352	0.095804	-1.214	0.225
-----				
Correlation matrix of residuals				
	KS200	VIX	USD/KRW	Gold
KS200	1.000000	-0.327004	-0.545180	0.123693
VIX	-0.327004	1.000000	0.427450	-0.149917
USD/KRW	-0.545180	0.427450	1.000000	-0.223610
Gold	0.123693	-0.149917	-0.223610	1.000000