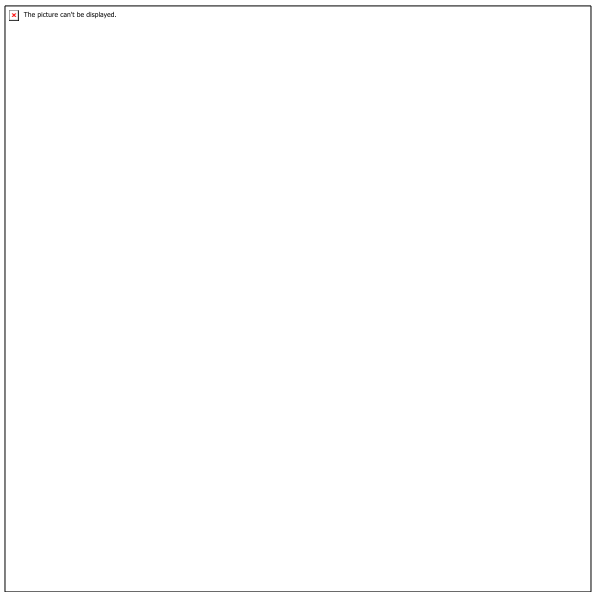
LAPORAN AKHIR
PENELITIAN SKEMA PENELITIAN DASAR



DAMPAK PANDEMI COVID-19 TERHADAP RISK DAN RETURNS SAHAM BERKELANJUTAN

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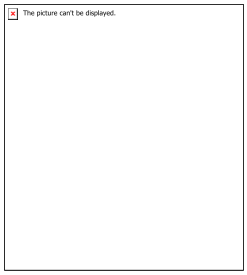
UNIVERSITAS MUHAMMADIYAH YOGYAKARTA

Dibiayai Oleh Lembaga Riset dan Inovasi (LRI)
Universitas Muhammadiyah Yogyakarta
Tahun Anggaran 2021/2022



UNIVERSITAS MUHAMMADIYAH YOGYAKARTA

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PROTEKSI ISI LAPORAN AKHIR PENELITIAN

LAPORAN AKHIR PENELITIAN

Informasi Data Usulan Penelitian

1. IDENTITAS PENELITIAN

A. JUDUL PENELITIAN

Dampak Pandemi Covid-19 terhadap Risk dan Returns Saham Berkelanjutan

B. SKEMA, BIDANG, TEMA, DAN TOPIK PENELITIAN

Skema Penelitian	Bidang Fokus Penelitian	Tema Penelitian	Topik Penelitian
Penelitian Dasar	Sosial Humaniora - Seni Budaya - Pendidikan	Ekonomi dan sumber daya manusia	Sumber daya manusia dalam lingkup organisasi industri

C. KOLABORASI DAN RUMPUN ILMU PENELITIAN

Jenis Kolaborasi Penelitian	Rumpun Ilmu 1	Rumpun Ilmu 2	Rumpun Ilmu 3
Kolaboratif Luar Negri	ILMU EKONOMI	ILMU EKONOMI	Ekonomi Pembangunan

D. WAKTU PELAKSANAAN

Tahun Usulan	Tahun Pelaksanaan	Lama Penelitian
2021	2022	1

E. ANCOR RESEARCH

Anchor Research	Topik Anchor
Romi Bhakti Hartarto, S.E.,M.Ec., Ph.D.	Macroeconomics Policy and Sustainable Development

2. IDENTITAS PENELITIAN

Nama	Peran	Tugas
Susilo Nur Aji Cokro Darsono, S.E., M.R.D.M	Ketua Pengusul	
Faiza Husnayeni Nahar, S.E., M.Ec.	Anggota Pengusul	Literature Study and Data verification
Hafsah Fajar Jati	Mahasiswa Bimbingan	Data Mining, Data Tabulation, Data Cleaning

3. MITRA KERJASAMA PENELITIAN (JIKA ADA)

Pelaksanaan penelitian dapat melibatkan mitra kerjasama, yaitu mitra kerjasama dalam melaksanakan penelitian, mitra sebagai calon pengguna hasil penelitian, atau mitra investor

Mitra	Nama Mitra	Kepakaran

4. KOLABORASI PENELITIAN (JIKA ADA)

Mitra	NIDN/NIK	Instansi
Nguyen Tranh Thai Ha	C2691295	Saigon University

5. LUARAN DAN TARGET CAPAIAN

Luaran Wajib

Tahun	Jenis Luaran
1	Publikasi Jurnal Internasional terindeks SCOPUS,

Luaran Tambahan

Tahun	Jenis Luaran

6. KLUSTER

Kluster	Sub Kluster	Group Riset	Mata kuliah
			--

7. ANGGARAN

Rencana anggaran biaya penelitian mengacu pada PMK yang berlaku dengan besaran minimum dan maksimum sebagaimana diatur pada buku Panduan Penelitian dan Pengabdian kepada Masyarakat.

Total Keseluruhan RAB Rp. 15,000,000

Tahun 1 Total Rp. 15,000,000

Jenis Pembelanjaan	Komponen	Item	Satuan	Vol.	Harga Satuan	Total
BAHAN	Bahan (Habis Pakai)	Kertas HVS	Unit	4	Rp. 50,000	Rp. 200,000
BAHAN	ATK (Kertas/Tinta/Alat Tulis dll)	Tinta dan Alat Tulis	Paket	5	Rp. 75,000	Rp. 375,000
PELAPORAN, LUARAN WAJIB, DAN LUARAN TAMBAHAN	Biaya Seminar Internasional	Biaya Seminar	Paket	1	Rp. 2,000,000	Rp. 2,000,000
PELAPORAN, LUARAN WAJIB, DAN LUARAN TAMBAHAN	Article Processing Charge (APC)	Proofreading Artikel	Artikel	1	Rp. 1,500,000	Rp. 1,500,000
ANALISIS DATA	Biaya Konsumsi Rapat	Konsumsi Rapat Data Analisis	OH	3	Rp. 200,000	Rp. 600,000
PELAPORAN, LUARAN WAJIB, DAN LUARAN TAMBAHAN	Article Processing Charge (APC)	Subsidi APC Jurnal terindeks SSCI	Artikel	1	Rp. 2,000,000	Rp. 2,000,000
BAHAN	Bahan (Habis Pakai)	Internet	Unit	3	Rp. 125,000	Rp. 375,000
PENGUMPULAN DATA	Honorarium Asisten Lapangan	HR Pembantu Lap	OJ	2	Rp. 500,000	Rp. 1,000,000
PENGUMPULAN DATA	Honorarium Sekretariat/Administrasi	HR Sekretariat	OB	2	Rp. 500,000	Rp. 1,000,000
PENGUMPULAN DATA	Honorarium Petugas Survey	HR Data Mining	OH/OR	2	Rp. 500,000	Rp. 1,000,000
PENGUMPULAN DATA	Tunjangan Kehadiran FGD	FGD 1	OK(Kali)	3	Rp. 250,000	Rp. 750,000
ANALISIS DATA	Honorarium Pengolah Data	HR Data Management	Per Penelitian	2	Rp. 1,000,000	Rp. 2,000,000
ANALISIS DATA	Honorarium Narasumber	HR Expert Data	OJ	1	Rp. 2,000,000	Rp. 2,000,000

8. LEMBAR PENGESAHAN

HALAMAN PENGESAHAN
LAPORAN AKHIR PENELITIAN SKEMA:

Judul	: Dampak Pandemi Covid-19 terhadap Risk dan Returns Saham Berkelanjutan
Peneliti/Pelaksana	: Susilo Nur Aji Cokro Darsono, S.E., M.R.D.M
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Jabatan Fungsional	: Asisten Ahli
Program Studi/Fakultas	: Ekonomi
Nomor HP	: 08565022013

Alamat surel (e-mail)	: susilonuraji@umy.ac.id

Anggota

Nama	: Faiza Husnayeni Nahar, S.E., M.Ec.
NIDN	: 0510099101
Jabatan Fungsional	: Lektor
Program Studi/Fakultas	: Ekonomi

Nama	: Hafsah Fajar Jati
NIM	: 20160430055
Prodi	: S1 Ekonomi

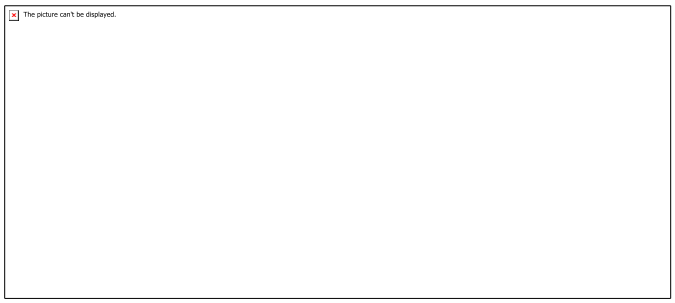
Nama	: Nguyen Tranh Thai Ha
NIK	: C2691295
Institusi	: Saigon University

Biaya	: Rp. 15,000,000

Yogyakarta, 06 Agustus 2022

Mengetahui,

Kepala LRI,



9. RINGKASAN

This research examines the effect of Covid 19 pandemic crisis and exchange rates on the sustainable stock market returns. Quantitative research method will be applied for this research, by using stock market data that collected from Bloomberg terminal and Coronavirus data from John Hopkins University Database. We use daily data for the period March 2020 – April 2022, which covers the before and recent Covid-19 pandemic period. Daily prices of energy, metals global prices also used as control variables in this research. To analyses the data, we implement a Panel ARDL model by using Pooled Mean Group (PMG) estimation which can estimates the short and long run effect of the stock market returns.

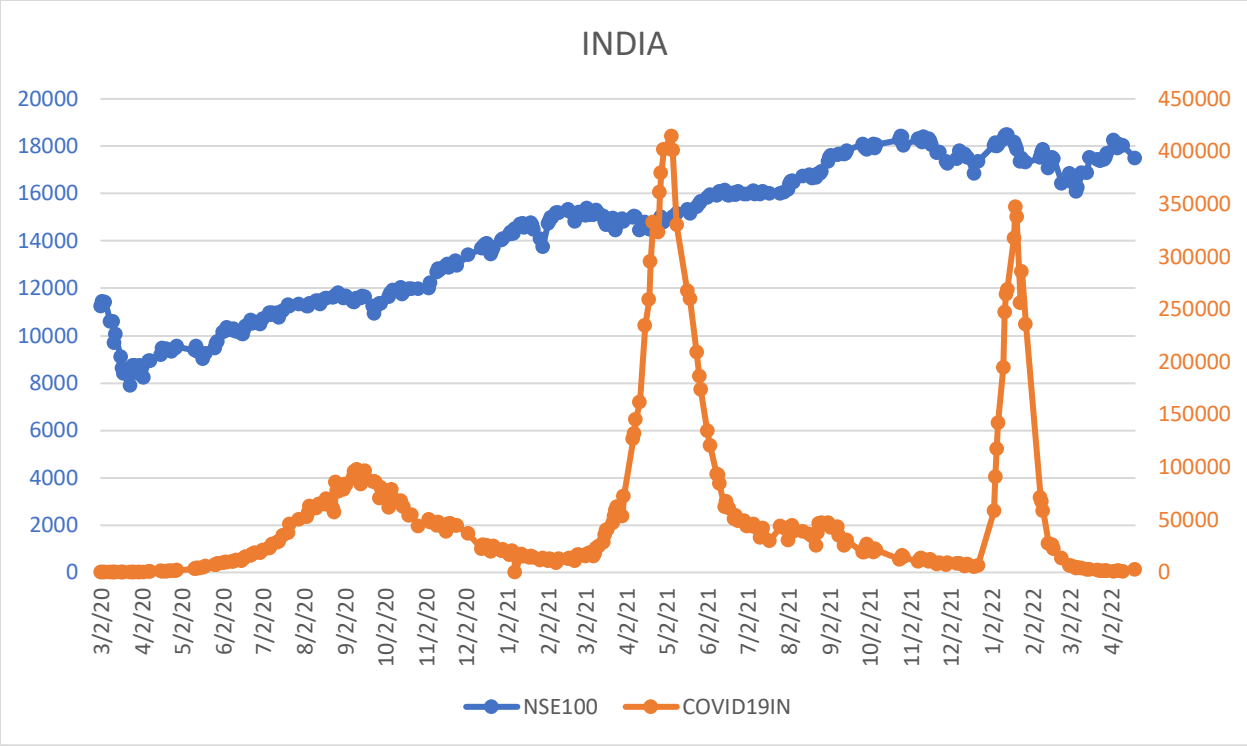
10. KEYWORDS

Sustainable Finance, Sustainable Stock Market, Covid-19, Stock Returns, Panel ARDL, PMG Estimation

11. HASIL PELAKSANAAN PENELITIAN

Empirical Results

This study used daily panel data of sustainability index, total active case of Covid-19, exchange rate of country's currency to USD of eight countries in Asia from March 2020 to April 2022. The following summarizes the price movement of the sustainable stock market price in eight Asia countries during the research period, which was combined with the individual Covid-19 active case through a time series plot.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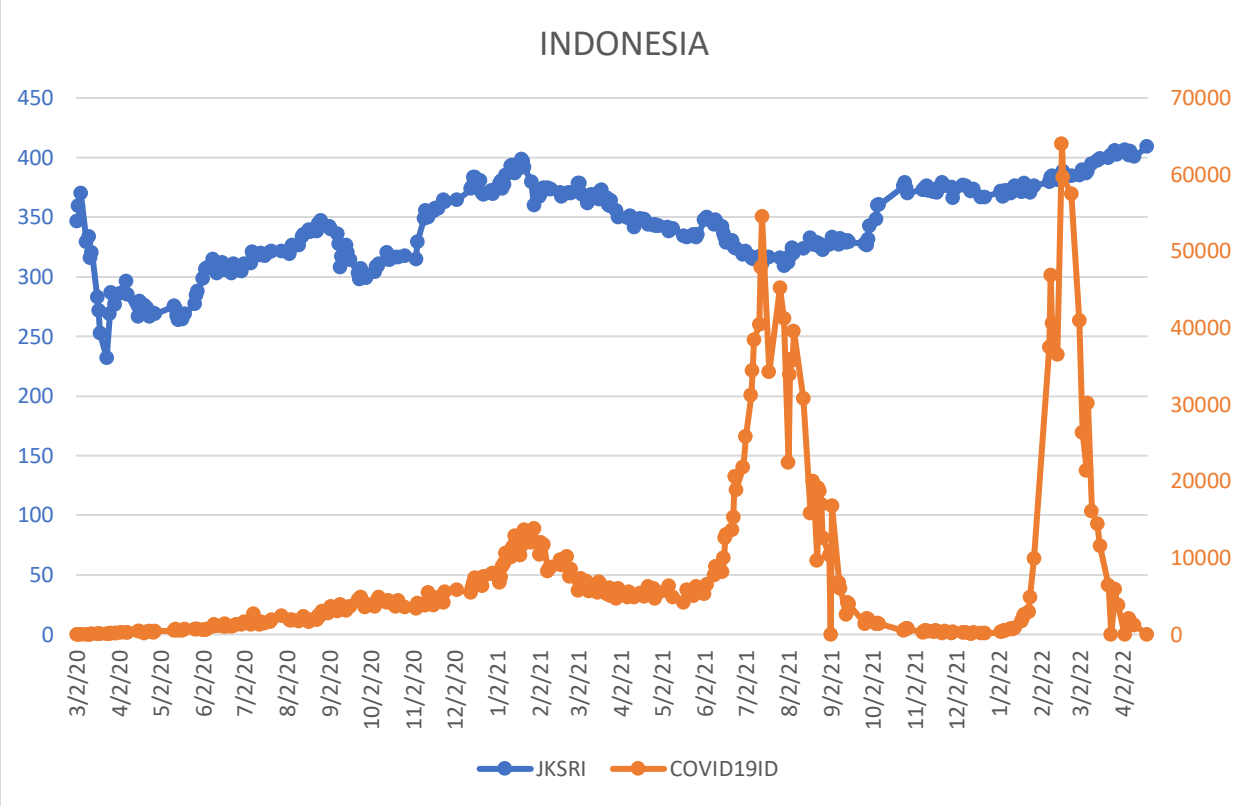
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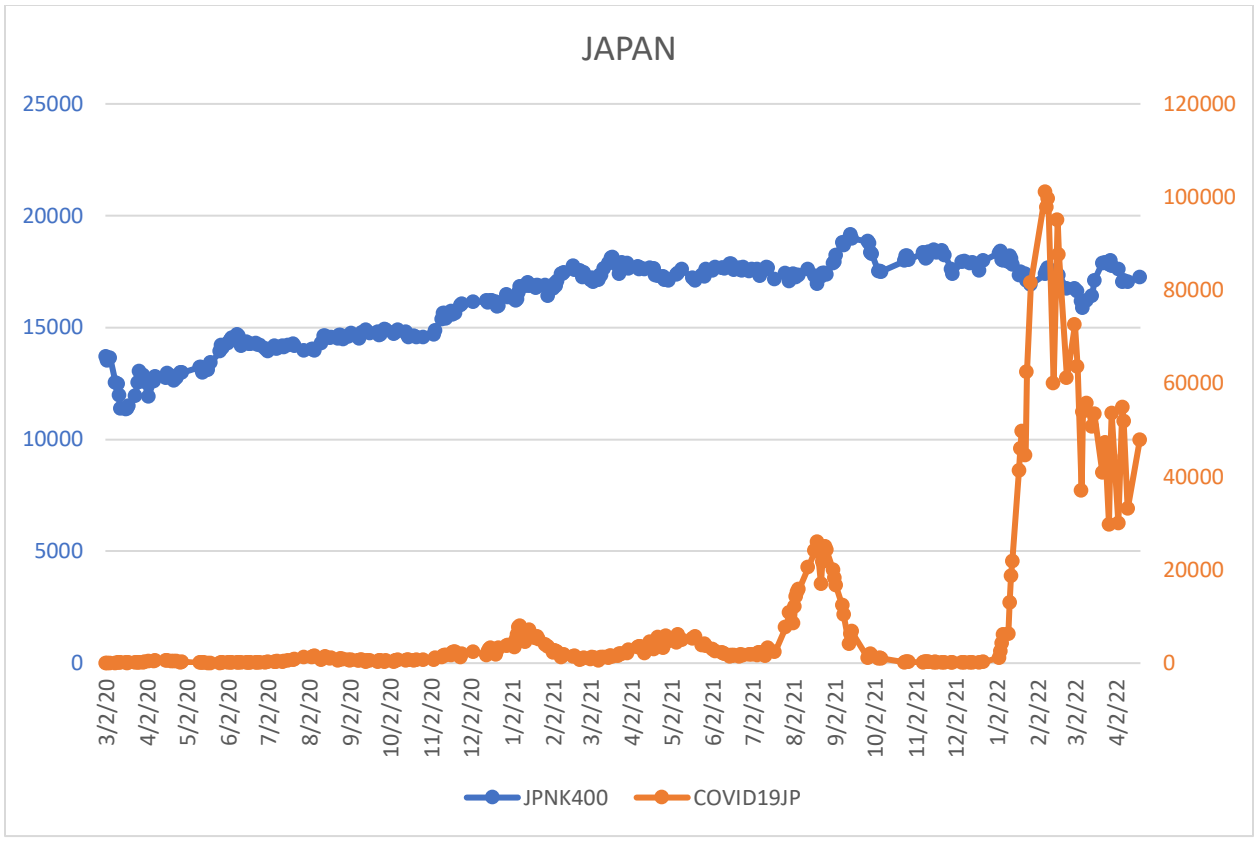
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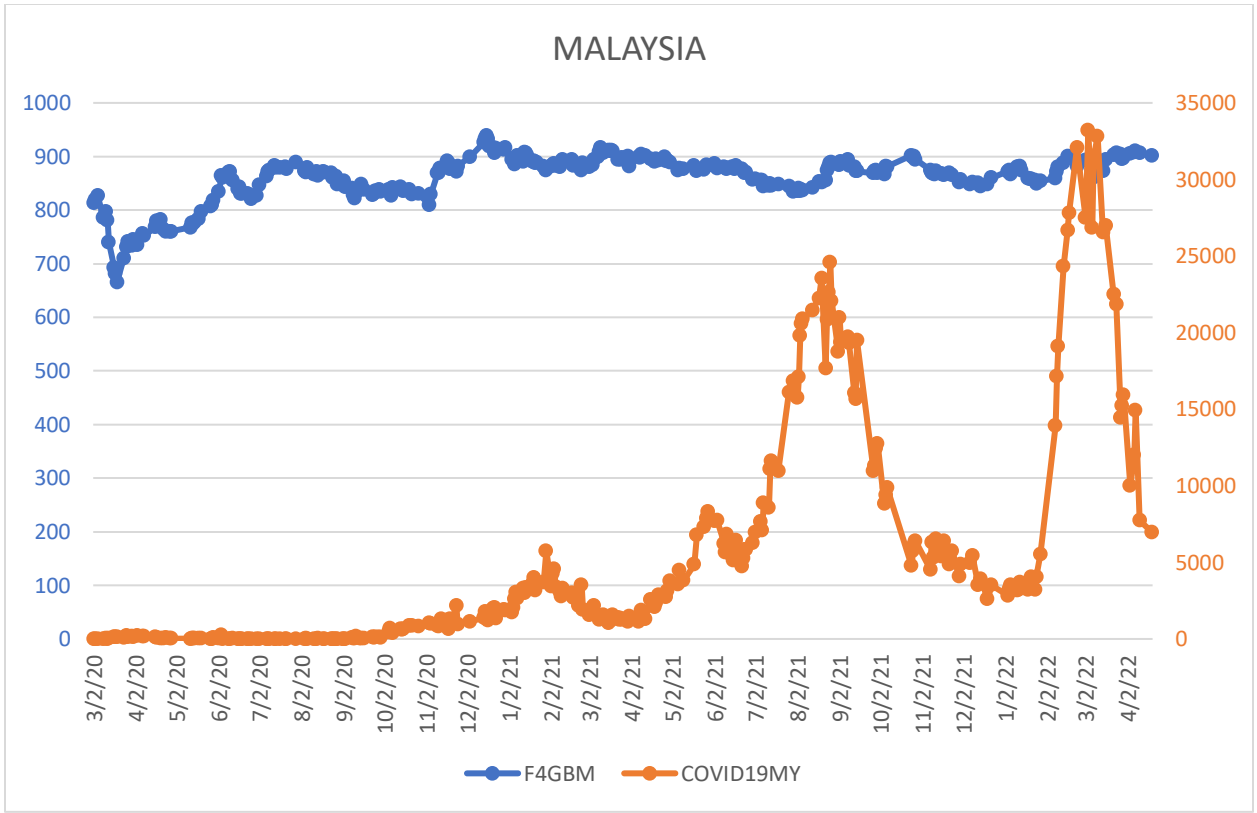
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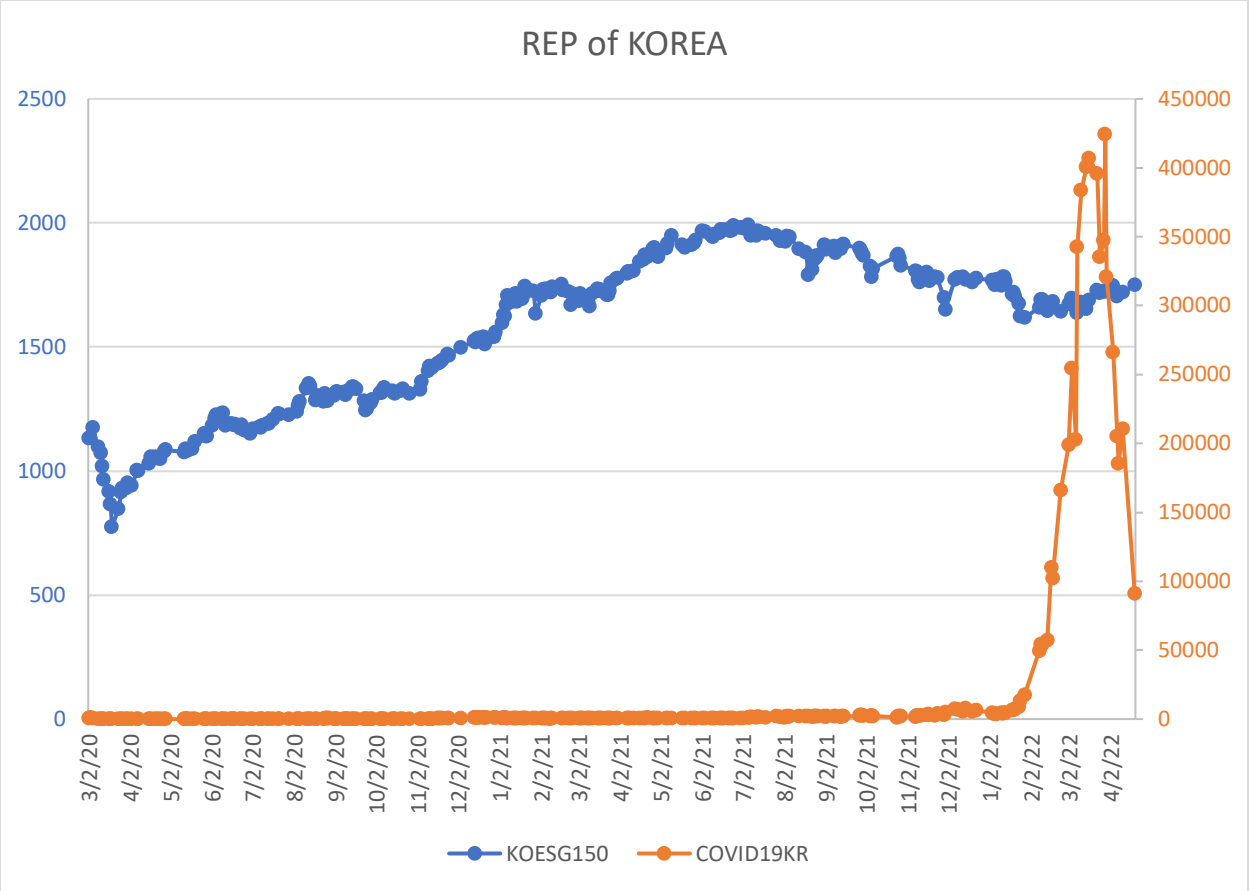
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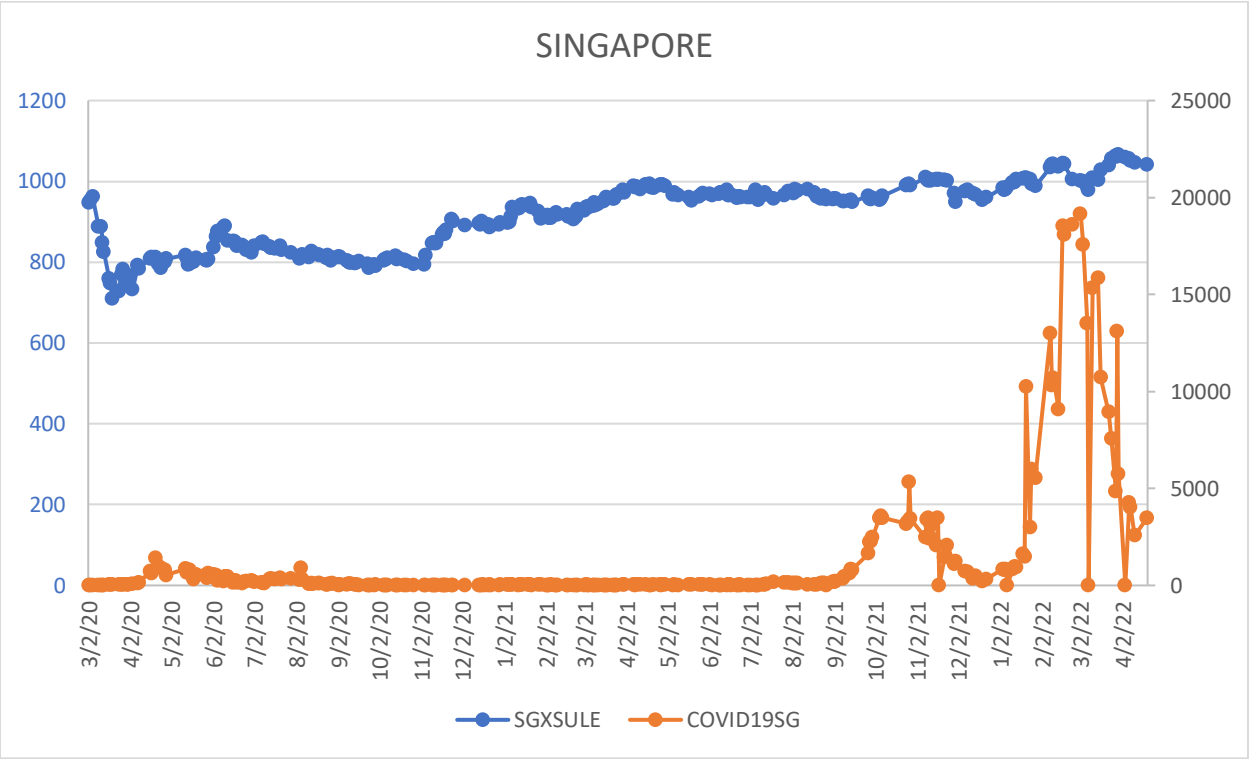
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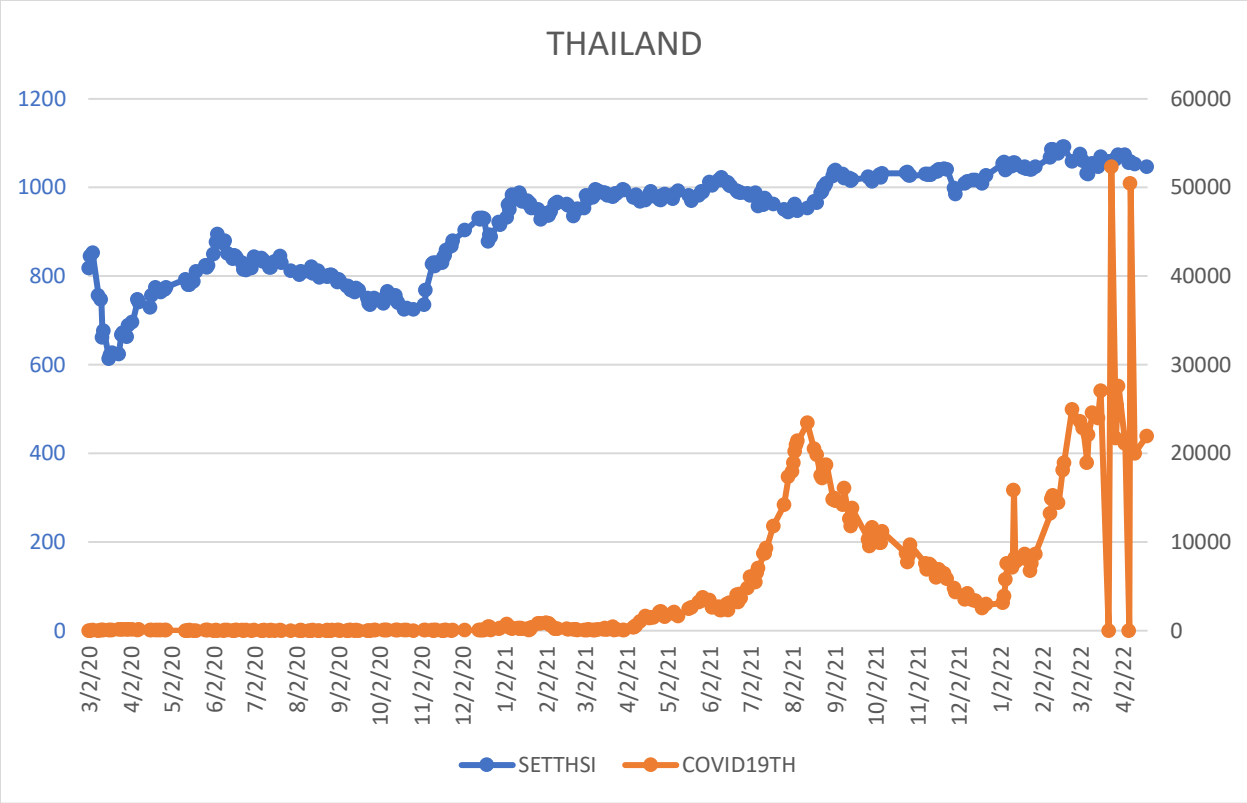

Figure 1 shows that the movement pattern of sustainable stock market prices and Covid-19 active case had correlations for each country. The movement of the stock price up in this research period is found in most of the countries except in China-HK which turn down since March 2021 until April 2022. This downturn might be affected by the increasing of Covid-19 cases and a slowdown of the global economy. Besides, the war among Russia and Ukraine might also affect the uncertainty of economy policy. The daily active case of Covid-19 is volatile in some countries such as India, Indonesia, Japan, Malaysia, Singapore and Thailand from Quartal 1 of 2021 until Quartal 1 2022.

Descriptive Statistics

Table 1 below presents the summary statistics of the average daily sustainable stock market returns for eight countries. The daily average return of the sustainable stock market is positive for all countries. All the stock return series are found to be negatively skewed except China and platykurtic except for Malaysia

Table 1

SUST INDEX	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic	Skewness Statistic	Kurtosis Statistic
HSCSI	296	18415.080	31084.940	25817.80605	2294.670522	.072	-.527
NSE100	296	7897.400	18485.700	14237.43514	2936.901287	-.322	-1.128

JKSRI	296	231.999	409.161	342.76914	35.171534	-.390	-.413
JPNK400	296	11342.750	19164.830	16213.87959	1823.182940	-.728	-.549
F4GBM	296	665.750	938.650	861.14885	43.744763	-1.662	3.438
KOESG150	296	774.050	1990.940	1572.38834	306.643243	-.547	-.924
SGXSULE	296	709.850	1066.270	914.70764	81.013726	-.356	-1.005
SETTHSI	296	612.610	1091.710	920.15459	114.321177	-.624	-.708
Total Obs	2368						

The summary statistics of Covid-19 active cases for eight countries are presented in Table 2 below. The variability of Covid-19 daily active case is observed to be greatest in India. Daily active case of Covid-19 in Rep of Korea has the biggest number of 424,528 cases and a standard deviation of 72,603.456. All of the daily case data are positively skewed and leptokurtic.

Table 2

COUNTRIES	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic	Skewness Statistic	Kurtosis Statistic
COVID19HK	296	0	76341	1306.50	7391.880	7.889	69.330
COVID19IN	296	0	414188	56344.74	81550.888	2.590	6.487
COVID19ID	296	0	63956	7737.91	11288.057	2.617	7.090
COVID19JP	296	19	101084	8606.16	18551.303	3.037	9.345
COVID19MY	296	0	33209	5359.92	7457.822	1.841	2.677
COVID19KR	296	9	424528	19850.41	72603.456	4.180	17.009
COVID19SG	296	0	19159	1254.74	3342.938	3.728	14.156
COVID19TH	296	0	52284	4700.08	7882.371	2.419	8.020
Total Obs	2368						

Table 3

CURRENCY	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic	Skewness Statistic	Kurtosis Statistic
HKDUSD	296	.127	.129	.12873	.000355	-1.367	1.397
INRUSD	296	.013	.014	.01346	.000196	-.235	-.771
IDRUSD	296	.000	.000	.00007	.000002	-2.203	6.348

JPYUSD	296	.008	.010	.00918	.000357	-1.016	1.266
MYRUSD	296	.226	.250	.23953	.004871	-.336	-.026
KRWUSD	296	.001	.001	.00086	.000032	.131	-1.092
SGDUSD	296	.689	.759	.73599	.015128	-.995	.507
THBUSD	296	.029	.034	.03151	.001141	.015	-1.100
Total Obs	2368						

Table 4 below presents the summary statistics of control variables such as gold and Brent oil global prices. It can be seen that Brent Oil (BOIL) price was growing rapidly from 19.990 USD per barrel to a maximum reach of 127.980 USD per barrel. While the maximum gold price reach 2054.6 USD per troy ounce during this research period.

Table 4

COMMODITIES	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic	Skewness Statistic	Kurtosis Statistic
GOLD	296	1477.900	2054.600	1827.74797	96.988224	-.514	.746
BOIL	296	19.990	127.980	61.54568	21.602534	.467	.014
Total Obs	2368						

Panel Unit Roots Test and Panel Cointegration Test

The first test applied for the panel ARDL approach is the panel unit root test. The unit root tests that are applied for the panel data in this research are Levin-Lin-Chiu (LLC) and Im-Pesaran-Shin (IPS) (Im, Pesaran, and Shin 2003; Levin, Lin, and James Chu 2002). The result given in Table 5 shows that all variables are I(1) and I(0) in log level and log first difference, respectively. The result of LLC and IPS of LNGOLD is stationary I(0) while sustainable stock market returns (SSMR), LNTCOVID19, exchange rate (LNEXRATE) and oil price (LNBOIL) are integrated of I(1) in LLC and IPS test. None of the variables is integrated of order greater than 1, indicating the appropriateness of the Panel ARDL approach. This level of integration might have been affected by structural breaks such as the Chinese stock market crash of 2015 and the Pandemic Covid-19 crisis of 2020 (Boateng, Adam, and Junior 2021; Broadstock et al. 2021; Chiah and Zhong 2020; Jin, Chen, and Yang 2019; Li, Wang, and Wang 2017; Luo and Zhang 2020)

Table 5

Variable	**Levin-Lin-Chiu**		**Im-Pesaran-Shin**	
	Level	**1st Difference**	**Level**	**1st Difference**
LNSSMR	0.139	-52.112***	0.628	-49.302***

LNTCOVID19	3.321	8.54	1.616	-13.778***
LNEXRATE	3.281	-53.392***	1.976	-48.949***
LNGOLD	-4.432***		-4.804***	
LNBOIL	1.930	-54.969***	2.416	-53.326***

Note: *** denotes 1% significance level.

This study has two cointegration tests, including Kao Test and Pedroni Test. The results of both test results are reported in Table 6. These show that all tests support a cointegration relation given that the null hypothesis is rejected.

Table 6

Kao Test			Pedroni Test		
	Statistics	p-value		Statistics	p-value
Augmented Dicky-Fuller	-2.582	0.0049	Phillips-Perron	-3.920	0.000
			ADF	-4.523	0.000

Panel ARDL

PMG Estimation Result

Dependent Variable: D(LNSSMR)
Method: ARDL
Date: 08/20/22 Time: 18:44
Sample: 3/05/2020 4/20/2022
Included observations: 2351
Maximum dependent lags: 2 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (2 lags, automatic): LNTCOVID19 LNEXRATE LNBOIL LNGOLD
Fixed regressors: C
Number of models evaluated: 4
Selected Model: ARDL(1, 2, 2, 2, 2)
Note: final equation sample is larger than selection sample

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Long Run Equation				
LNTCOVID19	0.041277	0.005011	8.236652	0.0000
LNEXRATE	1.593373	0.221893	7.180809	0.0000
LNBOIL	0.109266	0.024759	4.413138	0.0000
LNGOLD	-0.648398	0.099410	-6.522462	0.0000
Short Run Equation				
COINTEQ01	-0.047875	0.017945	-2.667885	0.0077
D(LNTCOVID19)	0.002992	0.017569	0.170304	0.8648
D(LNTCOVID19(-1))	-0.019870	0.016548	-1.200723	0.2300
D(LNEXRATE)	3.938535	2.732288	1.441479	0.1496
D(LNEXRATE(-1))	0.690855	0.853489	0.809449	0.4183
D(LNBOIL)	0.035997	0.010183	3.534975	0.0004
D(LNBOIL(-1))	0.033299	0.009120	3.651223	0.0003
D(LNGOLD)	-0.048155	0.040627	-1.185295	0.2360
D(LNGOLD(-1))	0.192757	0.030090	6.406052	0.0000
C	0.793554	0.273467	2.901827	0.0037

Root MSE	0.014884	Mean dependent var	0.000593
S.D. dependent var	0.018563	S.E. of regression	0.015155
Akaike info criterion	-5.535003	Sum squared resid	0.524377
Schwarz criterion	-5.330259	Log likelihood	6634.676
Hannan-Quinn criter.	-5.460465		

*Note: p-values and any subsequent tests do not account for model selection.

PMG Individual Nation Results

Individual countries' short-run coefficients estimated using the PMG estimator are shown in Table below in which the negative and significant ECT coefficients represent an adjustment speed for the long-run equilibrium relationship.

CHINA-HK

1

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-0.016683	7.39E-05	-225.6296	0.0000
D(LNTCOVID19)	-0.013506	0.000154	-87.79307	0.0000
D(LNTCOVID19(-1))	-0.017242	0.000152	-113.1673	0.0000
D(LNEXRATE)	22.97613	6.789864	3.383886	0.0430
D(LNEXRATE(-1))	6.638648	6.905161	0.961404	0.4073
D(LNBOIL)	0.078780	0.000336	234.3001	0.0000
D(LNBOIL(-1))	0.030150	0.000366	82.37898	0.0000
D(LNGOLD)	0.073568	0.004761	15.45114	0.0006
D(LNGOLD(-1))	0.124078	0.004595	27.00179	0.0001
C	0.293255	0.023028	12.73487	0.0010

INDIA

2

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-0.036809	8.79E-05	-418.5323	0.0000
D(LNTCOVID19)	-0.003649	0.000251	-14.54681	0.0007
D(LNTCOVID19(-1))	-0.029349	0.000268	-109.4042	0.0000
D(LNEXRATE)	1.950902	0.051070	38.20082	0.0000
D(LNEXRATE(-1))	-0.459634	0.049228	-9.336825	0.0026
D(LNBOIL)	0.010585	0.000302	35.09801	0.0001
D(LNBOIL(-1))	0.027770	0.000334	83.14556	0.0000
D(LNGOLD)	-0.129061	0.003699	-34.89071	0.0001
D(LNGOLD(-1))	0.320949	0.003557	90.22612	0.0000
C	0.747955	0.037847	19.76269	0.0003

INDONESIA

3

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-0.011232	0.000139	-81.06079	0.0000
D(LNTCOVID19)	-0.026454	8.83E-05	-299.5632	0.0000
D(LNTCOVID19(-1))	-0.003288	8.33E-05	-39.47960	0.0000
D(LNEXRATE)	0.990199	0.033937	29.17745	0.0001
D(LNEXRATE(-1))	-0.085630	0.032045	-2.672139	0.0756
D(LNBOIL)	0.066447	0.000438	151.8042	0.0000
D(LNBOIL(-1))	-0.009402	0.000455	-20.65059	0.0002
D(LNGOLD)	-0.148662	0.005401	-27.52303	0.0001
D(LNGOLD(-1))	0.275987	0.005476	50.39995	0.0000
C	0.282546	0.086664	3.260257	0.0471

JAPAN

4

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-0.059981	0.000395	-151.8082	0.0000
D(LNTCOVID19)	0.089431	0.001661	53.84217	0.0000
D(LNTCOVID19(-1))	-0.108247	0.001196	-90.47775	0.0000
D(LNEXRATE)	-0.276971	0.024085	-11.49983	0.0014
D(LNEXRATE(-1))	-0.406721	0.024139	-16.84936	0.0005
D(LNBOIL)	0.022244	0.000276	80.63122	0.0000
D(LNBOIL(-1))	0.021948	0.000276	79.56512	0.0000
D(LNGOLD)	-0.001152	0.003642	-0.316230	0.7726
D(LNGOLD(-1))	0.192325	0.003427	56.11511	0.0000
C	1.267650	0.160561	7.895132	0.0042

MALAYSIA

5

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-0.004567	2.85E-05	-160.3772	0.0000
D(LNTCOVID19)	-0.074846	0.000157	-477.0997	0.0000
D(LNTCOVID19(-1))	0.062200	0.000146	426.8646	0.0000
D(LNEXRATE)	0.992171	0.037971	26.12973	0.0001
D(LNEXRATE(-1))	0.100129	0.031557	3.172895	0.0504
D(LNBOIL)	0.010230	0.000139	73.64760	0.0000
D(LNBOIL(-1))	0.039076	0.000142	274.2695	0.0000
D(LNGOLD)	0.113357	0.001660	68.27040	0.0000
D(LNGOLD(-1))	0.073610	0.001949	37.75859	0.0000
C	0.059969	0.004805	12.47980	0.0011

Rep of KOREA

6

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-0.008797	6.44E-05	-136.4876	0.0000
D(LNTCOVID19)	0.001940	0.001536	1.263393	0.2957
D(LNTCOVID19(-1))	-0.005864	0.000583	-10.06478	0.0021
D(LNEXRATE)	1.643152	0.019950	82.36456	0.0000
D(LNEXRATE(-1))	0.071217	0.019222	3.704958	0.0342
D(LNBOIL)	0.027686	0.000246	112.3956	0.0000
D(LNBOIL(-1))	0.074051	0.000249	297.0848	0.0000
D(LNGOLD)	0.029229	0.003348	8.729092	0.0032
D(LNGOLD(-1))	0.212887	0.003359	63.37172	0.0000
C	0.200033	0.033332	6.001200	0.0093

SINGAPORE

7

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-0.101038	0.000405	-249.6503	0.0000
D(LNTCOVID19)	0.053404	5.21E-05	1025.529	0.0000
D(LNTCOVID19(-1))	-0.022692	5.98E-05	-379.2435	0.0000
D(LNEXRATE)	2.107998	0.042219	49.93023	0.0000
D(LNEXRATE(-1))	0.041114	0.039507	1.040673	0.3745
D(LNBOIL)	0.008786	0.000139	63.00579	0.0000
D(LNBOIL(-1))	0.061888	0.000135	457.7541	0.0000
D(LNGOLD)	-0.184686	0.001906	-96.89532	0.0000
D(LNGOLD(-1))	0.111585	0.001898	58.79598	0.0000
C	1.142155	0.058467	19.53500	0.0003

THAILAND

8

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-0.143893	0.000451	-319.3406	0.0000
D(LNTCOVID19)	-0.002384	5.81E-05	-41.00612	0.0000
D(LNTCOVID19(-1))	-0.034476	5.99E-05	-575.9688	0.0000
D(LNEXRATE)	1.124705	0.036769	30.58845	0.0001
D(LNEXRATE(-1))	-0.372280	0.035360	-10.52818	0.0018
D(LNBOIL)	0.063218	0.000280	225.9105	0.0000
D(LNBOIL(-1))	0.020908	0.000251	83.31659	0.0000
D(LNGOLD)	-0.137829	0.003447	-39.98884	0.0000
D(LNGOLD(-1))	0.230638	0.003313	69.61415	0.0000
C	2.354870	0.130288	18.07437	0.0004

12. KESIMPULAN PENELITIAN

This study examines both long- and short-run effects of Covid-19, exchange rate and investigates commodities prices such as gold and oil in the sustainable stock markets of 8 countries by using daily data for the period from 2015 to 2020. We first apply the Panel unit root tests developed by Levin-Lin-Chiu and Im-Pesaran-Shin (IPS) to this study. We then employ the cointegration tests in our analysis by using both the Kao test and Pedroni test to examine the integration of all of the variables. Further, we apply the dynamic panel autoregressive distributed lag (ARDL) technique to overcome the problem of different orders of integration among variables in our analysis. Another advantage of using this method is that it can distinguish the short and long-run relationships among variables. In particular, this study the Pooled Mean Group (PMG) estimator to examine the short-run and long-run effect of the COVID-19, Exchange Rate, gold prices and Brent oil prices on the returns of the sustainable markets. Thereafter, the Hausman test was applied to find the most efficient and consistent estimator.

This paper first contributes to the existing literature on factors affecting sustainable investment, particularly in the sustainable stock market. We first investigate both the short- and long-term effects from the panel COVID-19, Exchange Rate, gold prices and Brent oil prices to sustainable investment. We then discover that COVID-19 cases has a significantly positive effect in the long run though it has no significant effect on sustainable stock market returns in the short run. Thereafter, we find that the exchange rates and Brent oil prices have significantly positive impact on the sustainable stock market returns in the long run though it has no significant effect in the short run.

This study has several limitations. For instance, in this study, we examine the influence on stock market returns without considering the risks and volatility. Also, the panel ARDL model used in this study is appropriate in the case of mixed variables, for example some variables stationary but others nonstationary. However, this model restricts the variables under consideration to only one level of relationship and does not allow for a greater number of long-run relationships. Finally, the number of countries and observations included in this study is limited due to the available data with our best efforts.

Thus, further study could examine the influence on stock market returns by considering both the risks and volatility, study the issue by using the model that could allow for a greater number of long-run relationships, and investigate the issue by using dataset with longer period. Future research could also consider the potential effects of Covid-19 case and exchange rates on various types of sustainable investment. This paper uses panel autoregressive distributed lag (ARDL) models to examine the effect of Covid-19, exchange rates, gold and oil prices on sustainable investment returns. Extensions of our paper could include using our approach to study other important issues, for example, funding liquidity (Abbas, et al., 2021) and nearly non-stationary series (Cheng, et al., 2021). There are many important issues that academics and practitioners could apply the approach used in this paper in their studies. Readers may refer to Wong (2020) for more information.

13. STATUS LUARAN WAJIB

Proses penulisan manuskript

14. DOKUMEN LUARAN WAJIB

Manuskript untuk di Jurnal Scopus masih dalam proses

15. LINK LUARAN WAJIB

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16. STATUS LUARAN TAMBAHAN

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17. DOKUMEN LUARAN TAMBAHAN

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18. LINK LUARAN TAMBAHAN

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19. PERAN MITRA (JIKA ADA)

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20. DAFTAR PUSTAKA

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21. LAMPIRAN-LAMPIRAN

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