

Supplementary Material for:

Jang, J.Y.; Atukeren, E. Sustainable Local Currency Debt: An Analysis of Foreigners' Korea Treasury Bonds Investments Using a LA-VARX Model. *Sustainability* 2019, **11**, 3603.

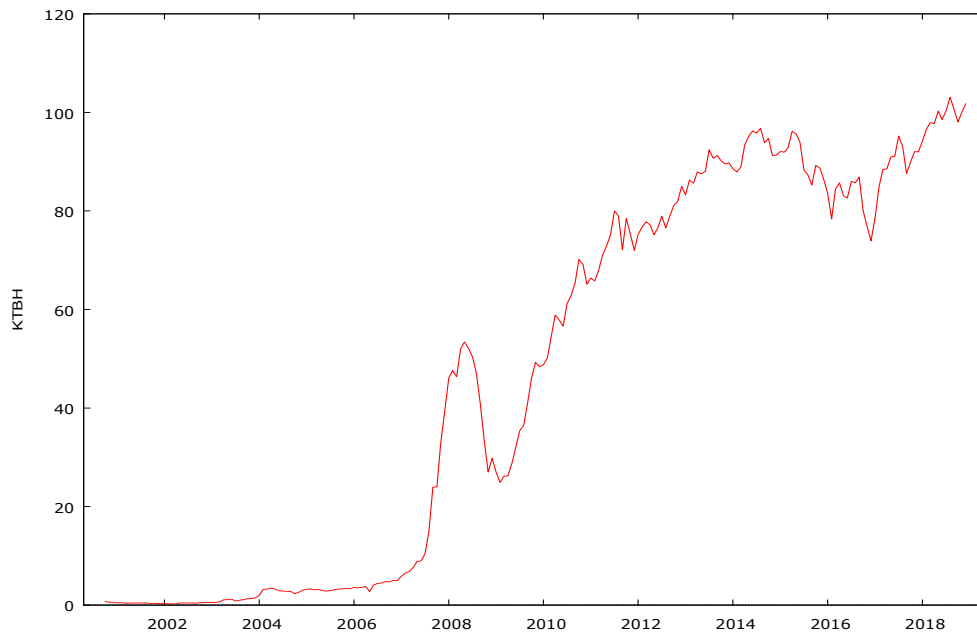


Figure S1. Developments in Korean local Bond holdings by Foreigner Investors' Overtime, Amount in billions of US\$.

Note: 1. Foreign ownership of bonds includes Special laws bond and Monetary Stabilization Bond (MSB) as well as KTBs.

2. End-of-period exchange rates are from Bloomberg.

Source: Ministry of Economy and Finance; Financial Supervisory Service, Korea

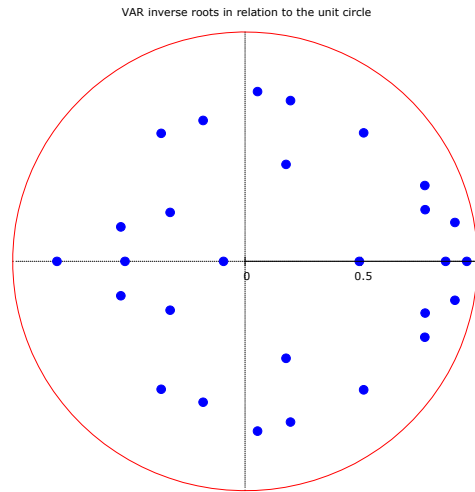


Figure S2. VAR Inverse Roots in relation to Unit Circle.

Factor	Domestic	International	Risk
Interest Rate [46-51]	KTB, MSB Call Rate Turnover Ratio KTB Maturity	UST, JGB, Gilt, Euro Bunt Fed Policy Rate, US\$ LIBOR Turnover Ratio Primary Issue Amount	
Spread & Curve [28,29,31,55-65]	MSB TED	EMBI++ US\$ TED Basis Swap Yield Curve Scope	
FX [33-35]	KRW/USD FX Spot FX Forward FX Volatility	Dollar Index	
Stock [30,42-45, 66, 67]	KOSPI KOSPI Volatility	Dow, S&P 200, MSCI Indexes VIX	
CDS [29,36-41]	ROKCDs	CDX, PIIGS CDS	
Oil [52-54]		Crude Oil	
Macroeconomic Indicators [68-87]	CPI M2 GDP Current Account CLI	CPI M2 GDP Current Account CLI	Credit Rating Sovereign Debt Fiscal Deficit Foreign Reserve
Others [88-107]			Property Right Protection Settlement System Political Events Geopolitical Uncertainty Policy Uncertainty Regulation Taxation

Table S1. Factors that have been found to affect Investment in Literature Review

Variable	Lag	Coefficient	Standard Error	T-Ratio
C	N/A	0.586	0.183	3.191***
KTBH	1	0.003	0.005	0.584
	2	0.005	0.007	0.718
	3	-0.006	0.008	-0.735
	4	-0.003	0.006	-0.507
KTBY	1	1.102	0.085	12.830***
	2	-0.243	0.132	-1.837*
	3	0.173	0.111	1.549
	4	-0.126	0.071	-1.785*
KTED	1	0.101	0.058	1.743*
	2	-0.048	0.093	-0.518
	3	-0.164	0.068	+2.393**
	4	0.108	0.066	1.625
KCDS	1	0.001	0.000	1.640
	2	-0.001	0.001	-1.217
	3	-0.001	0.000	-1.226
	4	0.001	0.000	2.504**
UCUV	1	0.258	0.200	1.292
	2	-0.678	0.283	2.390**
	3	0.441	0.219	2.014**
	4	-0.065	0.134	-0.483
KEPU	1	-0.000	0.000	-0.554
	2	0.000	0.000	0.018
	3	-0.000	0.000	-1.179
	4	0.000	0.000	0.607
KGEO	1	-0.000	0.000	-0.748
	2	0.000	0.000	1.311
	3	-0.000	0.000	-0.672
	4	-0.000	0.000	-0.131
Ad. R squared	0.979	<i>p</i> -value (F)	2.80e-173	

Table S2. LA-VARX Estimation Results for KTBY

Note: ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Variable	Lag	Coefficient	Standard Error	T-Ratio
C	N/A	0.118	0.294	0.402
KTBH	1	-0.024	0.008	-3.031***
	2	-0.013	0.010	-1.218
	3	0.009	0.011	0.882
	4	0.015	0.006	2.339**
KTBY	1	-0.204	0.091	-2.339**
	2	0.108	0.156	0.689
	3	0.004	0.179	0.026
	4	-0.001	0.119	-0.088
KTED	1	0.357	0.102	3.477***
	2	0.227	0.113	2.008**
	3	-0.031	0.075	-0.424
	4	-0.167	0.083	-1.994
KCDS	1	-0.004	0.001	-4.350***
	2	0.003	0.002	4.530
	3	-0.004	0.001	-2.592**
	4	0.000	0.001	0.318
UCUV	1	-0.079	0.225	-0.350
	2	0.473	0.409	1.157
	3	-0.132	0.325	-0.407
	4	0.027	0.171	0.160
KEPU	1	-0.001	0.000	-2.681***
	2	0.000	0.000	0.004
	3	0.000	0.000	1.266
	4	-0.000	0.000	-0.601
KGEO	1	-0.000	0.000	-0.017
	2	-0.000	0.000	-2.320**
	3	0.000	0.000	2.795***
	4	0.000	0.000	1.971*
Ad. R squared	0.854	<i>p</i> -value (F)	2.17e-93	

Table S3. LA-VARX Estimation Results for KTED

Note: ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Variable	Lag	Coefficient	Standard Error	T-Ratio
C	N/A	-48.84	29.947	-1.609
KTBH	1	-0.389	0.985	-0.395
	2	1.995	1.050	1.899*
	3	-3.221	1.277	-2.521**
	4	2.384	1.219	1.955*
KTBY	1	1.340	9.026	0.148
	2	4.417	9.099	0.485
	3	10.513	10.778	0.975
	4	-3.935	7.456	-0.527
KTED	1	10.261	8.499	1.207
	2	7.455	14.438	0.516
	3	-16.899	8.647	-1.954*
	4	6.463	6.235	1.037
KCDS	1	0.914	0.070	12.890***
	2	0.080	0.116	0.694
	3	-0.146	0.130	-1.121
	4	0.058	0.110	0.526
UCUV	1	45.596	18.388	2.480**
	2	-87.874	35.714	-2.460**
	3	27.324	31.960	0.854
	4	0.886	20.309	0.043
KEPU	1	0.149	0.066	2.253**
	2	-0.110	0.067	-1.648
	3	0.002	0.038	0.056
	4	0.079	0.042	1.894*
KGEO	1	0.058	0.032	1.810*
	2	-0.024	0.048	-0.517
	3	-0.018	0.027	-0.685
	4	-0.027	0.033	-0.807
Ad. R squared	0.873	<i>p</i> -value (F)	8.20e-111	

Table S4. LA-VARX Estimation Results for KCDS

Note: ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Variable	Lag	Coefficient	Standard Error	T-Ratio
C	N/A	-0.119	0.094	-1.269
KTBH	1	0.002	0.003	0.690
	2	0.007	0.004	1.614
	3	0.001	0.005	0.352
	4	-0.005	0.002	-2.113**
KTBY	1	-0.008	0.026	-0.328
	2	0.096	0.042	2.281**
	3	-0.025	0.048	-0.533
	4	-0.015	0.033	-0.445
KTED	1	0.031	0.030	1.051
	2	0.003	0.031	0.113*
	3	0.040	0.024	1.696
	4	0.025	0.026	0.963
KCDS	1	0.000	0.000	0.376
	2	-0.000	0.000	-0.471
	3	0.000	0.000	1.186
	4	0.000	0.000	1.889*
UCUV	1	0.847	0.072	11.740***
	2	-0.099	0.117	-0.847
	3	0.263	0.106	2.465**
	4	-0.193	0.062	-3.105***
KEPU	1	0.000	0.000	1.364
	2	0.000	0.000	1.592
	3	0.000	0.000	0.016
	4	0.000	0.000	0.857
KGEO	1	-0.000	0.000	-1.676*
	2	0.000	0.000	1.840*
	3	0.000	0.000	0.284
	4	0.000	0.000	0.076
Ad. R squared	0.955	<i>p</i> -value (F)	2.90e-134	

Table S5. LA-VARX Estimation Results for UCUV

Note: ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Variable	Lag	Coefficient	Standard Error	T-Ratio
C	N/A	18.005	37.321	0.482
KTBH	1	-5.383	2.431	-2.215**
	2	4.578	2.713	1.687*
	3	-0.0882	1.861	-0.474
	4	1.133	1.530	0.740
KTBY	1	-12.249	16.175	-0.757
	2	21.451	18.143	1.182
	3	-25.967	15.615	-1.663*
	4	16.538	12.682	1.304
KTED	1	-10.077	14.302	-0.704
	2	-11.041	16.012	-0.698
	3	6.346	11.439	0.554
	4	-2.909	9.843	-0.295
KCDS	1	-0.245	0.140	-1.744*
	2	-0.326	0.176	-1.852*
	3	0.515	0.144	3.560***
	4	-0.171	0.141	-1.212
UCUV	1	58.330	42.954	1.358
	2	-2.460	53.0\604	-0.045
	3	34.998	37.134	0.945
	4	-66.928	30.304	-2.209**
KEPU	1	0.635	0.089	7.141***
	2	0.074	0.082	0.902
	3	-0.133	0.086	-1.532
	4	0.096	0.077	1.237
KGEO	1	0.083	0.106	0.782
	2	-0.011	0.082	-0.140
	3	-0.083	0.071	-1.315
	4	-0.069	0.066	-1.036
Ad. R squared	0.535	<i>p</i> -value (F)	5.82e-47	

Table S6. LA-VARX Estimation Results for KEPU

Note: ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.