

# Economic Transparency means a creditworthy sovereign

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- Sovereign Economic Transparency is the extent to which authorities provide timely, reliable and accessible information relating to fiscal and monetary policies and the general economy.
- In this paper, Eaton Vance Management explores the relationship between Economic Transparency and Yield Spreads, Credit Ratings, Stock Price Volatility and Trust in Government across 130 countries.
- We find that greater Economic Transparency correlates with lower sovereign Yield Spreads and better Credit Ratings. The empirical results are compelling evidence to support our continued efforts to engage sovereign issuers and recommend greater Economic Transparency.
- Conversely, we find that greater Economic Transparency does not correlate to greater volatility in a country's capital market, as measured by stock price volatility. The Trust in Government that a nation's citizens report is also not correlated to Economic Transparency.
- Altogether, our research demonstrates that both investors and sovereigns benefit from improved Economic Transparency, a "win-win" outcome for ESG engagement.



## Introduction

Countries that have experienced financial stress frequently lacked the amount of publicly available data that financially healthier nations readily provide. A reliable example is Argentina, which has defaulted nine times since the country was founded in 1816. Over a year before Argentina's 2014 default, the International Monetary Fund (IMF) (2013) censured the country for not providing accurate data on inflation and economic growth. Yet, as early as Argentina's first sovereign default in 1890, off-balance sheet government liabilities existed, which contributed to the default. In that seminal default, the issuance of commercial bank bonds had been permitted so long as they were backed by government gold bonds. The financial innovation "constituted a new liability on the government's balance sheet" (Mitchener & Weidenmier, 2008), one which exceeded more than £30 million. As context, Argentina's 1890 default was £48 million in size. While a deterioration in the terms of trade and asset-liability duration mismatch were principal causes of the default, Ford (1956) noted that "he [the investor] was grossly misled by the Argentine government which because of its difficult budgetary position continued to borrow abroad merely to pay off existing service charges in the easiest immediate way", suggesting transparency issues beset Argentina since its first sovereign default.

Recognizing the importance of economic transparency, multilateral financial institutions, including the IMF and World Bank, have encouraged authorities to increase their levels of transparency (International Monetary Fund, n.d.; The World Bank, 2020). This stems from the understanding that transparency allows for the public to monitor and hold the authorities accountable (Cukierman, 2001). Further, this trend toward greater transparency can also be understood as "part of a broader trend ... to make government more responsive to the public" (Dincer & Eichengreen, 2014).

## Yield Spreads

In 1996, the IMF created two frameworks – the Special Data Dissemination Standard and the General Data Dissemination System – which require subscribing countries to "provide certain information to the IMF about [its] practices in disseminating economic and financial data." The IMF considers all the data it receives on four dimensions: the data's characteristics (coverage, periodicity and timeliness), accessibility to the public, integrity of the data and quality of the data. This framework has served as a model for many countries in their pursuit of transparency. This was a result of understanding that each past episode of sovereign financial turmoil has demonstrated that even "international rescue packages for crisis-hit countries have been compromised by data deficiencies."

In a 2017 paper, authors Choi and Hashimoto observed that emerging markets countries that adopted the IMF's previously-mentioned frameworks experienced a "15 percent reduction in spreads one year following such reforms," suggesting a tangible economic benefit from improvements in data provision.

## Credit Ratings

Researchers have also examined specific areas of transparency including fiscal transparency. In 2012, Arbatli and Escolano sought to determine what quantitative and qualitative variables would have an effect on sovereign ratings. They found a more transparent fiscal system would incentivize policymakers to reduce the number of "pet projects" and "pet organizations," and, thereby, reduce wasteful spending. Additionally, Arbatli and Escolano (2012) concluded that "enhancing fiscal transparency is associated with better credit ratings for both advanced and developing economies. Fiscal transparency appears to have both a direct credibility effect on ratings and an indirect effect through its role in encouraging better fiscal policies."

Subsequently, Montes and de Oliveira (2019) examined 50 countries using a panel data approach. Their results also found that greater fiscal transparency explained better credit ratings.

## Trust in Government

Transparency has also been touted as a key to Trust in Government. Grimmekhuijsen (2012) concluded that "transparency is strongly advocated by citizens, interest groups and some scholars ... it makes government officials perform better, it prevents corruption, and it increases citizen trust in government."

Other research has sought to understand how citizens' perceptions of transparency and Trust in Government are developed. Results reveal that to increase Trust in Government, not only must a government release information but the information must also be accurate (Alessandro, Lagomarsino, Scartascini, Streb, & Torrealday, 2021).

At the same time, research has shown transparency and Trust in Government are not systematically positively correlated (Mabillard & Pasquier, 2016). Using open-sourced indexes, Mabillard & Pasquier looked at 10 countries from 2007-2014 and conducted a comparative study on how transparency and Trust in Government relate. The study showed inconclusive results, but they hypothesized that "it is not the low level of transparency that leads to less trust from the citizens, but rather the initial level of the population's mistrust in public authorities that triggers more requests for access to official documents and a more proactive transparency policy from the government." Keeping these past instances of research in mind while examining Trust in Government and transparency, we choose to further explore whether a relationship exists utilizing a proprietary Economic Transparency index.



## Stock Price Volatility

Another relationship that may exist is between transparency and capital market volatility. Papadamou et al. (2014) examined more than 40 countries from 1998-2005 and found that “moving towards monetary policy transparency is recommended as stock market volatility can be reduced considerably, implying significant benefits for financial stability.” For investors, lower volatility means a lower discount rate when valuing assets.

## Methodology

Within this paper, we share our research findings on the effects of greater Economic Transparency on a sovereign nation. We build upon Montes and de Oliveira’s (2019) work by expanding the scope to a proprietary Economic Transparency index that characterizes not only central bank transparency, but also fiscal, legislative and economic data transparency. We also expand the sample size to 130 countries as compared to their 50-country sample size. The dependent variables we examined were Yield Spread, Credit Rating, Trust in Government and Stock Price Volatility, as described above.

Given that our independent variable Economic Transparency is a proprietary construct for which we do not have time series data, our panel data model utilizes Ordinary Least Squares regressions.

Each equation employs a matrix of control variables that have been identified in previous literature or that we have determined to be related to sovereign risk. The matrix components are Changes in Terms of Trade, Economic Freedom, Long-term Debt (% of Gross Domestic Product), Short-term Debt (% of Reserves) and 5-Year Average Gross Domestic Product (GDP) Growth, GDP per capita, net oil exporter status, political system, and reserves (% of GDP).

$$\text{Yield Spread}_i = \alpha + \beta_1 \text{EconomicTransparency}_i + \beta_2 X_i + \varepsilon_i \quad (1)$$

$$\text{Credit Rating}_i = \alpha + \beta_1 \text{EconomicTransparency}_i + \beta_2 X_i + \varepsilon_i \quad (2)$$

$$\text{Trust in Government}_i = \alpha + \beta_1 \text{EconomicTransparency}_i + \beta_2 X_i + \varepsilon_i \quad (3)$$

$$\text{Stock Price Volatility}_i = \alpha + \beta_1 \text{EconomicTransparency}_i + \beta_2 X_i + \varepsilon_i \quad (4)$$

Where:

i = country  $\beta$  = regression coefficient

X = matrix of control variables  $\varepsilon$  = error term

## Data

### Defining Economic Transparency

Eaton Vance Management has developed an Economic Transparency index with the intent of capturing a country’s policy for making fiscal, monetary and general economy data publicly available in a timely, reliable and accessible manner.

Our data collection is a manually intensive process, which involves examining governmental agencies’ data and publications. Our scoring methodology rates each country on how well its periodicity and timeliness of data provision meet our benchmarks, as well as how frequently they provide information in English. While careful attention was given to each country’s score, the scores are a result of a laborious, manual effort from our team, and as such, may be subject to human error. Likewise, our Economic Transparency index may not be immediately updated.

The specific scoring methodology can be seen in Tables 1 and 2.

Table 1  
Scoring Methodology

Topic	Periodicity	Timeliness Threshold
<b>Provision of Data</b>		
<b>Ministry of Finance</b>		
Budget Balance	Monthly	30 days
Revenue	Monthly	30 days
Expenditure	Monthly	30 days
Public Debt	Monthly	30 days
<b>Central Bank</b>		
PPI	Monthly	21 days
CPI	Monthly	21 days
Reserves	Monthly	7 days
Balance of Payments	Quarterly	45 days
Credit Growth	Monthly	not determinable
Monetary Aggregate	Monthly	not determinable
External Debt	Quarterly	30 days
<b>Statistics Agency</b>		
Employment	Quarterly	45 days
Unemployment Rate	Quarterly	30 days
Net Wage Growth	Quarterly	45 days
Gross Wage Growth	Quarterly	45 days
Industrial Production	Monthly	30 days
Exports	Quarterly	not determinable
Imports	Quarterly	not determinable
National Accounts	Quarterly	60 days



Table 2  
Scoring Methodology (cont.)

Topic	Periodicity
<b>Availability of Publications</b>	
<b>Central Bank</b>	
Inflation Report	Quarterly
Policy Decision Statements	N/A
Policy Decision Minutes	N/A
Central Bank Press Conferences	N/A
Commentary on reserves dynamics	Monthly
Commentary on inflation dynamics	Monthly
Commentary on balance of payments	Quarterly
<b>Ministry of Finance</b>	
Annual budget bill	Annual
Medium-term budget plans	Annual
Budget Spreadsheets	Annual
Macroeconomic report/forecast	Annual
Draft legislation proposed by ministry	N/A
<b>Parliament</b>	
Draft legislation database	N/A
<b>Government</b>	
Draft legislation proposed by government	N/A
Government Program	N/A
<b>Statistics Agency</b>	
Commentary on Industrial Production Dynamics	Monthly

Here is how we scored the countries on each of the components:

Table 3  
Rating

4 = Meets or exceeds periodicity and timeliness
3 = Meets or exceeds periodicity, misses timeliness
2 = Meets or exceeds periodicity, misses timeliness by significant amount
1 = Misses periodicity or misses timeliness by very significant amount
0 = Not available

We automatically scored countries a “2” if the data is not provided in English, as seen in Table 3.

Our Economic Transparency index is unique from existing transparency indexes (Table 4) because it covers a wider scope of countries, a greater number of variables (central bank, fiscal and economic transparency) and will be updated on an annual basis with a shorter lag time. The combined breadth and depth of our Economic Transparency index along with incorporating a timeliness measure is our principle contribution to existing transparency literature.

Table 4  
Other Indexes

Comparable Economic Transparency Indexes	Link	Gaps	Differences
The Open Budget Index	<a href="#">International Budget</a>	Only updated every two years; with a 1-year lag	Looks at eight budget documents: assesses public availability of the documents, as well as looks at how public resources have been raised, planned and spent. It covers 77 countries (International Budget, 2019).
World Bank - Budget Transparency	<a href="#">World Bank</a>	1-year lag (2019)	Data related to budget and spending. It covers 139 countries (The World Bank Group, 2020).
IMF Dissemination Standards	<a href="#">IMF</a>	Not as extensive	We utilize the Special Data Dissemination Standards (SDDS) in a part of our existing index (availability of economic data). It does not cover the publications we cover such as the Central Bank's Inflation Report or the Ministry of Finance's Annual Budget Bill. <sup>1</sup> There are over 140 countries that are currently subscribed to its various data reporting frameworks (International Monetary Fund, n.d.).
HRV Transparency Project	<a href="#">HRV</a>	Not current (covers 1980-2010)	It utilizes “240 measures of the economy collected by the World Bank's World Development Indicators.” It specifically covers data that is obtained from national statistical offices on economic information. It covers 125 countries (HRV Transparency Project, n.d.).
OECD - OURdata Index (Government at a Glance)	<a href="#">OURdata</a>	1-year lag (2019)	Looks at central-/federal-level policies with regard to accessibility, availability and reuse. It covers 34 countries (OECD, n.d.).

<sup>1</sup>Our scoring methodology utilizes the IMF's frameworks creating part of our framework. However, our “Availability of Publications” piece is unique to us.



## Correlations

As expected, the Open Budget Index (OBI) data and the World Bank's (WB) data have a notable, positive correlation to our more comprehensive Economic Transparency index (Table 5). However, the 0.65-0.66 correlations suggest that our Economic Transparency index is unique, especially compared to the OBI versus WB correlation of 0.94.

Table 6

### Eaton Vance Management Economic Transparency scores

Country	Transparency Score	Country	Transparency Score	Country	Transparency Score	Country	Transparency Score
Germany	125	Netherlands	105	Greece	90	Dominican Republic	62
Lithuania	125	Sri Lanka	105	Nigeria	90	Honduras	62
Ukraine	123	Estonia	104	Namibia	89	Kenya	62
Armenia	122	India	103	Tanzania	87	Nicaragua	62
Finland	119	Kazakhstan	103	Uzbekistan	87	Botswana	60
Italy	119	Mauritius	102	Saudi Arabia	85	Venezuela	60
Georgia	118	Paraguay	102	Zimbabwe	85	Bolivia	59
South Korea	118	Bulgaria	101	China	84	Bahamas	57
United States	117	Israel	101	Uganda	84	Cambodia	57
Malaysia	116	Mexico	101	Macau	83	Haiti	57
Romania	114	Montenegro	101	Morocco	83	Oman	57
Slovenia	114	Norway	101	Ghana	82	Tajikistan	56
Sweden	114	Peru	101	Denmark	81	Guyana	55
United Kingdom	114	Moldova	100	Guatemala	81	Rwanda	55
Latvia	113	Switzerland	100	Tunisia	81	Belize	54
Portugal	113	Colombia	99	Uruguay	81	Mozambique	54
South Africa	113	Turkey	99	Egypt	80	Angola	53
France	111	Iceland	98	Costa Rica	79	Bahrain	53
Belarus	110	Pakistan	98	Jordan	79	Grenada	52
Chile	110	Seychelles	98	El Salvador	78	Lebanon	52
Cyprus	110	Thailand	98	Zambia	78	Cameroon	49
Ireland	110	Argentina	96	Bosnia	77	United Arab Emirates	46
Singapore	110	Japan	96	Trinidad and Tobago	76	Kuwait	44
Australia	109	Spain	96	Fiji	75	Republic of Congo	43
Belgium	109	Croatia	95	Papua New Guinea	74	Suriname	43
North Macedonia	109	Indonesia	95	Senegal	74	Togo	42
Slovakia	109	Mongolia	94	Panama	70	Côte d'Ivoire	41
Brazil	108	Russia	93	Barbados	69	Aruba	39
Czech Republic	108	Albania	92	Maldives	69	Myanmar	39
Poland	107	Hungary	92	Ecuador	68	Iraq	32
Serbia	107	Jamaica	92	Vietnam	68	Benin	30
Canada	106	Hong Kong	91	Qatar	66	Gabon	30
Philippines	106	Azerbaijan	90	Ethiopia	65	Laos	24

Table 5

### Correlations between Eaton Vance's index and other indexes

	EVM's ET	OBI	WB
EVM's ET	1	0.65	0.66
OBI	0.65	1	0.94
WB	0.66	0.94	1



## Dependent Variables

Yield Spreads and Credit Ratings are sourced from Damodaran (2021)<sup>2</sup>. The data set's "Country Risk Premium" is used for Yield Spread. We convert Moody's credit ratings provided by Damodaran into a numerical scale from 0 to 20 (a higher number refers to a "better" credit rating). See Table 7 for the conversion between the letter scale to numerical scale.

Table 7  
Credit Rating Conversion

Aaa	20
Aa1	19
Aa2	18
Aa3	17
A1	16
A2	15
A3	14
Baa1	13
Baa2	12
Baa3	11
Ba1	10
Ba2	9
Ba3	8
B1	7
B2	6
B3	5
Caa1	4
Caa2	3
Caa3	2
Ca	1
C	0

Stock Price Volatility is sourced from the World Bank's Global Financial Development Database. Stock Price Volatility is defined as the 360-day average volatility of the national stock market index (The World Bank Group, n.d.).

Trust in Government figures come from the Wellcome Global Monitor.<sup>3</sup> This monitor consists of survey data. We utilize the share of people who responded, "a lot" and "some" to the following questions:

How much do you trust each of the following: other people in your neighborhood; your national government; scientists; journalists; doctors and nurses; people who work at nongovernmental or nonprofit organizations; healers? Do you trust them a lot, some, not much or not at all? (Wellcome Global Monitor, 2019).

## Control Variables

GDP per capita is sourced from the World Bank's World Development Indicators data set (2021).<sup>4</sup> The U.S. Energy Information Association's data set allowed us to determine which countries were net energy exporters by subtracting the country's energy consumption from production. Production and consumption of energy consist of coal, natural gas, petroleum (and other liquids), nuclear and renewables. Resultant sums were converted then into a binary variable, indicating whether a country is a net importer or exporter of energy, respectively 0 or 1.

A variable for describing a country's political system was obtained from the Center for Systemic Peace's data set: Polity5. The data set looks at countries with a population greater than 500,000 and identifies any "democratic and autocratic 'patterns of authority' and regime changes" (INSCR Data Page, 2020). We utilized the Polity2 variable from the data set, which scores countries between -10 to 10, from a scale of autocratic to democratic.

Change in Terms of Trade is sourced from the World Bank (2021) and is the standard deviation of the past six annual changes. The data exhibited outliers, so a winsorization was performed at the 5% level.

Economic Freedom is obtained from the Fraser Institute's Economic Freedom of the World Index. The summary variable ranks countries on an index from 0 to 10, 10 being the most free (Gwartney, Lawson, Hall, & Murphy, 2020).

Long-term Debt (% of GDP) is from the World Bank (2021) and represents external debt in foreign currency, both public and private.

Short-term Debt (% of Reserves) is from the World Bank (2021). Short-term external debt is that debt in foreign currency, public and private, which is due in under a year. Reserves refer to all assets held by the monetary authorities of the country. The data exhibited outliers, so a winsorization was performed at the 5% level.

Reserves (% of GDP) is from the World Bank (2021). Figures refer to all of the assets held by the central bank of the country.

5-Year Average Gross Domestic Product (GDP) Growth is from the World Bank (2021). We calculate this specific variable by compounding average of real gross domestic product per capita growth over the past five years.

<sup>2</sup>The data was last updated January 1, 2021. <sup>3</sup>The data was collected in 2018 and published in 2019. <sup>4</sup>Last entry is from 2020. It is captured in U.S. dollars.



## Descriptive Statistics

Table 8

### Eaton Descriptive Statistics

Variable	Observations	Mean	StDev	Minimum	Maximum
Yield Spread (%)	123	3.67%	3.42%	0	19.2%
Credit Rating	123	10.1	5.46	0	20
Trust in Government	102	50.2	17.7	10.9	95.9
Stock Price Volatility	80	14.7	6.48	3.38	45.5
Economic Transparency	130	84.9	24.8	24	125
GDP per capita (\$'s)	128	17,391	20,307	503	84,096
Log GDP per capita (\$'s)	128	3.94	0.543	2.70	4.92
Net oil exporter	129	0.256	0.438	0	1
Polity2	120	4.96	5.94	-10	10
Change in Terms of Trade volatility	130	2.17	24.0	4.95 e-3	273
Change in ToT (winsorized)	130	0.0693	0.0574	9.3 e-3	0.219
Economic Freedom	126	6.96	0.876	3.40	8.94
LT Debt (% of GDP)	107	53.3	40.2	0.0	203
ST Debt (% of reserves)	107	84.5	253	0	2.3 e3
ST Debt (winsorized)	107	52.8	65.9	0	259
Reserves (% of GDP)	129	22.2	19.0	0.8	121
5-year avg GDP growth	129	0.980	3.22	-19.7	7.83

## Results

In single variable regressions (see Table 9, regressions 1-a and 2-a), Economic Transparency respectively explained 26% and 27% of the variance in Yield Spreads and Credit Ratings. Incorporating the matrix of control variables raises the r-squared of the model to 0.69 and 0.74, respectively, for Yield Spreads and Credit Ratings (regressions 1-b and 2-b). The results mean a country with higher Economic Transparency is likely to have a lower Yield Spread and a better Credit Rating. Importantly, Economic Transparency remains a significant independent variable when control variables are included.

Our results indicate that Economic Transparency does not explain Trust in Government (regressions 3-a and 3-b). Additionally, Economic Transparency has no correlation to Stock Price Volatility (regressions 4-1 and 4-b) upon closer examination. The inclusion of nine control variables still leaves 75% or more of the variance in Trust in Government and Stock Price Volatility unexplained.

These two dependent variables, therefore, likely have much different determinants than those explored here. We note that anecdotal data points in the Wellcome Global Monitor's Trust in Government survey were curious; for example, Myanmar's institutions received a very high trust score from survey respondents.

While not necessarily directly explored, we also observed that the polity variable, which indicates whether a country is an autocracy or democracy, does not explain Yield Spreads or Credit Rating. However, Trust in Government is higher within democratic countries.

It is also important to note in understanding these results that Economic Transparency is distinct from the control variables at hand. Viewing the pairwise correlations (Table 10), we are able to identify that all of the correlations are either .44 or lower. Another indirectly related observation that we can extract is that the data suggests countries with greater economic freedom and more democracy appear to be wealthier and have greater economic transparency.



Table 9

## Regressions

$$\text{Yield Spread}_i = \alpha + \beta_1 \text{EconomicTransparency}_i + \beta_2 X_i + \varepsilon_i \quad (1)$$

$$\text{Credit Rating}_i = \alpha + \beta_1 \text{EconomicTransparency}_i + \beta_2 X_i + \varepsilon_i \quad (2)$$

$$\text{Trust in Government}_i = \alpha + \beta_1 \text{EconomicTransparency}_i + \beta_2 X_i + \varepsilon_i \quad (3)$$

$$\text{Stock Price Volatility}_i = \alpha + \beta_1 \text{EconomicTransparency}_i + \beta_2 X_i + \varepsilon_i \quad (4)$$

	(1-a)	(1-b)	(2-a)	(2-b)	(3-a)	(3-b)	(3-b.1)	(4-a)	(4-b)
Economic Transparency	-7.06 e-4*** (-6.48)	-2.86 e-4** (-2.66)	-2.86 e-4** (-2.66)	0.0288** (1.99)	0.0729 (0.97)	0.0722 (0.64)		-4.02 e-3 (-0.11)	0.0456 (0.94)
Log GDP per capita (\$'s)		-0.0207*** (-3.80)		4.69*** (6.40)		-15.3** (-2.50)	0.916 (0.28)		-0.348 (-0.15)
Net oil exporter		-8.21 e-3 (-1.55)		0.640 (0.90)		13.5** (2.49)	7.77* (1.79)		1.90 (0.88)
Polity2		4.15e4 (1.07)		-7.73 e-3 (-0.15)		-0.770 (-1.61)			-0.234 (-1.53)
Change in ToT (winsorized)		0.02071 (0.48)		5.50 (0.94)		-30.3 (-0.62)			-27.7 (-1.57)
Economic Freedom		-0.0163*** (-5.32)		1.71*** (4.15)		5.87* (1.87)			-2.66** (-2.21)
LT Debt (% of GDP)		0.0282*** (5.15)		-4.13*** (-5.62)		-7.76 (-1.41)			-1.14 (-0.54)
ST Debt (winsorized)		6.22e3* (1.68)		0.335 (0.67)		3.99 (1.15)			-0.120 (-0.10)
Reserves (% of GDP)		-9.18 e-4		3.74** (2.07)		12.8 (0.87)			-1.57 (-0.30)
5-year avg GDP growth		-0.127 (-1.56)		23.4** (2.13)		127 (1.45)			-41.3 (-1.13)
Constant	0.0972*** (10.0)	0.239*** (11.5)	0.215 (0.14)	-22.9*** (-8.17)	43.6*** (6.19)	60.1** (2.66)	45.2*** (3.43)	15.1*** (4.37)	33.7*** (3.83)
N	122	92	123	92	102	79	100	80	57
F-statistic	42.0	18.1	45.4	23.0	0.94	2.05	1.61	0.01	1.56
R-squared	0.26	0.69	0.27	0.74	0.01	0.23	0.03	0.00	0.25
Maximum VIF	n/a	1.89	n/a	1.89	n/a	2.09	1.03	n/a	2.29

Notes: t-statistics in parenthesis, \*\*\*significant at 99% level; \*\*significant at 95% level; \*significant at 90% level

Table 10

## Correlations between Control Variables

	Economic Transparency	Log GDP per capita	Net oil exp.	Polity2	Change in ToT (winsorized)	Economic Freedom	LT Debt	ST Debt (winsorized)	Reserves
Log GDP per capita (\$'s)	0.413								
Net oil exporter	-0.303	-0.036							
Polity2	0.391	0.084	-0.238						
Change in ToT (winsorized)	-0.437	-0.065	0.521	-0.469					
Economic Freedom	0.417	0.489	-0.281	0.261	-0.270				
LT Debt (% of GDP)	-0.025	0.082	0.000	0.0843	0.013	0.102			
ST Debt (winsorized)	0.229	0.285	-0.177	0.126	-0.163	0.057	0.366		
Reserves (% of GDP)	0.127	0.228	-0.089	-0.048	0.018	0.247	0.168	-0.034	
5-year avg GDP growth	0.163	0.011	-0.347	0.003	-0.330	0.267	-0.052	-0.064	0.120



## Conclusion

The purpose of our research and econometric models is to better understand the relationship between a country's Economic Transparency and its defining investment qualities such as Yield Spreads and Credit Ratings. At Eaton Vance, we utilize metrics of Economic Transparency to forecast likely asset valuation changes in real time. In this way, we are able to provide econometrically sound insights to our investors on the value of sovereign assets.

At the same time, we seek to inform sovereign countries of our findings relating to Economic Transparency. We have begun using the findings presented here as the basis of our engagement with policymakers; we believe

policymakers will be interested in knowing how to lower their borrowing costs and improve their Credit Ratings by pursuing greater Economic Transparency.

We also want to note that going forward (2021), we will utilize a revised version of the scoring methodology. The methodology will continue to utilize the same components we currently capture in addition to adding more data on state-owned enterprises. Further, our team will also do a thorough check to review the quality and accuracy of the information provided; if concerns are brought up about quality and accuracy, we will adjust scores accordingly.



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