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Determinants of Sovereign Spreads in The Bahamas

Josef Platzer

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Western Hemisphere Department

Determinants of Sovereign Spreads in The Bahamas

Prepared by Josef Platzer*

Authorized for distribution by Swarnali Ahmed Hannan
April 2025

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ABSTRACT: To analyze Bahamian sovereign spreads, a fundamentals-based model is estimated using data on emerging market economies. The main findings are: first, while both domestic and global covariates are important determinants of spreads, a sizeable effect comes from the interaction of global risk aversion and a country's risk rating. Second, inclusion in the EMBIG index (Emerging Market Bond Index Global) is a significant driver for emerging markets. The spreads in The Bahamas would have compressed by 56 basis points compared to other countries with similar fundamentals if the archipelago were included in this index.

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Author's E-Mail Address:	jplatzer@imf.org

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The Bahamas

Prepared by Josef Platzer[1]

[1] "The author would like to thank Swarnali Ahmed Hannan and Alexandre Chailloux for helpful comments.

INTERNATIONAL MONETARY FUND

THE BAHAMAS

SELECTED ISSUES

December 17, 2024

Approved By
Western Hemisphere Department

Prepared By Josef Platzer (RES, formerly WHD).

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DETERMINANTS OF SOVEREIGN SPREADS IN THE BAHAMAS[1]

To analyze Bahamian sovereign spreads, a fundamentals-based model is estimated using data on emerging market economies. The main findings are: first, while both domestic and global covariates are important determinants of spreads, a sizeable effect comes from the interaction of global risk aversion and a country's risk rating. Second, inclusion in the EMBIG index (Emerging Market Bond Index Global) is a significant driver for emerging markets. The spreads in The Bahamas would have compressed by 56 basis points compared to other countries with similar fundamentals if the archipelago were included in this index.

A. Introduction

1. Spreads on Bahamian sovereign bonds issued on international capital markets increased sharply following the onset of the COVID-19 pandemic, rising by as much as 1,200 basis points—more than five times their pre-pandemic levels. The country faced multiple challenges during this period, including a substantial rise in debt, driven by both pandemic-related expenditures and the impact of a major hurricane that occurred just prior to the pandemic. Moreover, the Bahamian economy, heavily reliant on tourism, was severely impacted by the global downturn in travel. Although spreads have recently moderated, they remain elevated relative to their historical levels. Wider spreads imply higher government borrowing costs, and consequently that a larger share of fiscal resources has to be devoted to servicing public debt.

B. Sample and Stylized Facts

2. The analysis is based on an unbalanced panel of 73 countries classified as emerging and developing economies by the IMF, at monthly frequency ranging from January 2005 to April 2024. The dependent variable is the hard-currency sovereign bond spread. The explanatory variables are grouped into domestic variables, which are country specific and therefore vary across countries, and global variables (Csonto and Ivaschenko, 2013). The covariates included in the sample follow the existing literature on the determinants of sovereign spreads.[2] The domestic variables included relate to a country's macroeconomic performance, its fiscal position, the external sector, and institutional quality. The global variables are meant to account for the global business cycle, global financial conditions, as well as market volatility and risk perception. Variables are available at varying frequencies, depending on the country. If a data series is not already at monthly frequency,

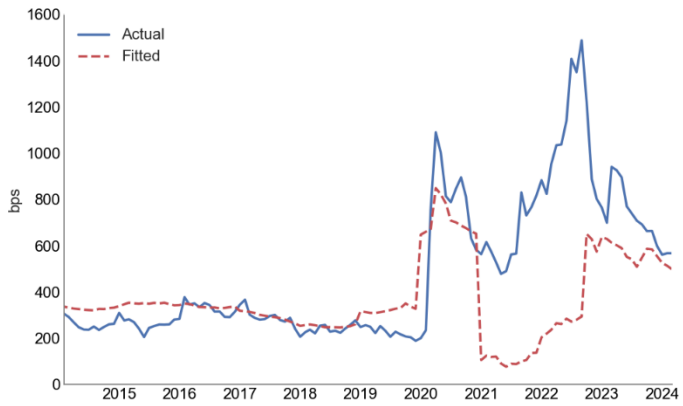
[1] Prepared by Josef Platzer (RES, formerly WHD).

[2] See for example Bellas et al. (2010), Belhocine and Dell'Erba (2013), Csonto and Ivaschenko (2013), Presbitero et al. (2015).

it is converted using the value from the respective quarter or year. Table 1 in the annex contains details on the data sources, variable units, variable transformation, and additional information.[3]

3. Sovereign spreads of The Bahamas were close to the sample median before the COVID-19 pandemic but increased to well above the 75th percentile during the pandemic. The Bahamas was hit particularly hard by the pandemic, with one of the largest declines in output (Figure 1). However, the country's economy has also recovered rapidly since then. Public debt has increased steadily since 2005. While this was in line with the sample median until 2019, the Bahamas experienced a particularly large upward jump in its debt-to-GDP ratio in 2020 and is now among the top 25 percent of countries in the sample. However, the Bahamian level of external debt is below the sample median. The sovereign credit rating of The Bahamas consistently deteriorated over the sample period. In particular, the Bahamas' credit rating was lowered twice since 2020, and is currently standing at a single-B rating.[4] In terms of external sector variables, the current account balance tends to be very negative in the Bahamas, but the country had a relatively high level of currency reserves throughout the pandemic. Finally, the governance index, a measure of institutional quality, is relatively high in The Bahamas, close to the 75th percentile of the sample, even though it has been declining over the sample period.[5]

Figure 1. Bahamian Sovereign Spreads: Actual vs Model-Fitted
(Basis points)



Sources: Bloomberg LLC and IMF staff calculations.

[3] Dickey-Fuller and Perron-P tests were used to test for stationarity of the included variables. Variables governance index, government debt, external debt, dollar index, and global growth are detrended using a linear trend before being included in the panel regressions.

[4] The sovereign ratings variable in the sample is constructed as the median of the available sovereign ratings by Moody's, Standard and Poor's (S&P), and Fitch, and takes on one of seven values: AAA/AA (combined), A, BBB, BB, B, CCC, CCX. "CCX" denotes countries in default, rated lower than "CCC."

[5] Table 2 in the annex shows summary statistics for the dependent variable, domestic and global covariates, as well as the two dummy variables of EMBIG inclusion and IMF program engagement. Figures 5 and 7 in the annex show time series plots of the sovereign spread and the domestic covariates for The Bahamas, as well as median, 10th, 25th, 75th, and 90th percentiles of the full sample. Figure 6 shows time series plots for the global covariates.

C. Empirical Model

4. To investigate formally the relationship between sovereign spreads and domestic and global covariates a panel regression model is estimated. The baseline regression specification is:

$$spread_{it} = \alpha + X_{it}\beta + Z_t\gamma + D_{it}\delta + \sum_k \omega_k rating_{it}^k \times VIX_t + \epsilon_{it} \qquad (1)$$

where $spread_{it}$ is the sovereign spread of country i in month t, X_{it} is a vector with domestic covariates, and β the corresponding coefficients, Z_t is a vector of global covariates, and γ the corresponding coefficients, and D_{it} denote dummy variables and δ the corresponding coefficients. The baseline specification includes dummies for individual sovereign credit rating grades, denoted $rating_{it}^k$, interacted with the Chicago Board Options Exchange's Volatility index (VIX), with ω_k the corresponding coefficients.[6] Finally, α is the intercept, and ϵ_{it} is the error term. The domestic covariates (X_{it}) included in the baseline specification are GDP growth, inflation, government debt, current account balance, reserves, and governance index. The global covariates (Z_t) in the baseline specification are global growth and the Merrill Lynch Option Volatility Estimate index (MOVE). The dummy variables included are whether a country is included in the EMBIG index, a dummy for an active IMF lending program, and a dummy for commodity exporters. Interacting rating grade with the VIX allows for a non-linear relationship between sovereign default risk (as measured by sovereign credit ratings) and the international risk environment (as measured by the VIX index). Equation (1) is estimated on the sample ranging from January 2005 to April 2024, excluding observations with spreads above 3000 basis points, or more than four times the standard deviation above the median observation.

D. Results

5. The model is able to fit well the dynamics of Bahamian sovereign spreads over recent years. The model-implied spread is very close to the actual spread up until 2020, the onset of the COVID-19 pandemic. In 2020, both the actual and model-implied spreads surged by over 400 basis points. However, starting in 2021, a noticeable gap between the actual and fitted spreads emerges. This divergence in 2021 can partly be attributed to catch-up growth from the pandemic, which in the model translates to a substantial decline in spreads. While economic recovery can be expected to be positive news for investors, the model may overestimate this effect. The residual remained substantial in 2023, though it had decreased from its peak in late 2022. Throughout 2023 and 2024, the residual continues to narrow, reaching 70 basis points by the end of the sample period.

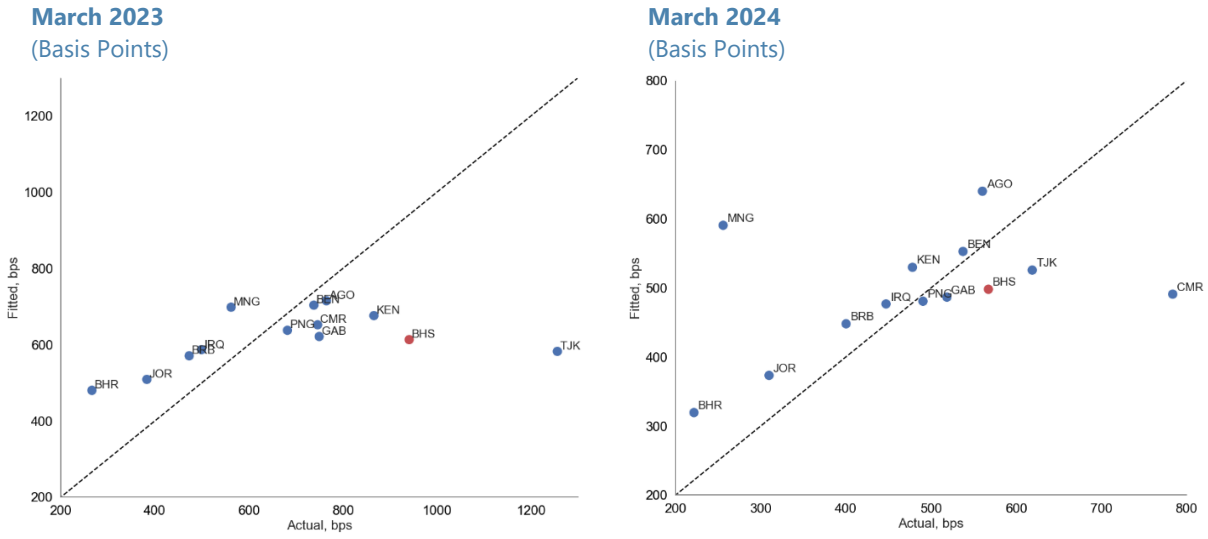
6. Changes in The Bahamas' sovereign rating correspond closely with significant movements in Bahamian sovereign spreads. The country's median rating dropped from "BBB" to "BB" in early 2020, and again from "BB" to "B" in late 2022. At both times, the fitted spread exhibits discrete jumps, consistent with relatively large estimated coefficients for sovereign rating grades

[6] The notation implies that, for example, it holds that $rating_{it}^A = 1$ if and only if country i in period t has a single-A sovereign credit rating, and $rating_{it}^A = 0$ otherwise. It holds that $k \in \{A, BBB, BB, B, CCC, CCX\}$, where grades "AAA" and "AA" are excluded to avoid collinearity.

below investment grade (i.e., lower than "BBB"). These jumps in the fitted spread coincide closely with increases in the observed sovereign spread, though it is notable that spread increases can precede official rating downgrades by several months.

7. Bahamian sovereign spreads have declined since late 2022 and, by 2024, are aligned both with peer economies and the model-implied spread. Scatterplots of actual and model-implied spread for single-B rated countries across two time horizons (March of 2023 and 2024) show that the residual is generally small, with most countries lining up along the 45-degree line (Figure 2). This suggests that the decline in The Bahamas' residual from March 2023 to March 2024 may not be due to an overall improvement in the model's fit but rather to specific developments in The Bahamas not captured by the model. While most of the covariates included in the analysis are slow-moving, sovereign spreads can change instantly as investors respond to news. One possible interpretation of variation in the residual is that it reflects the release of country-specific news, particularly related to key factors influencing sovereign spreads.

Figure 2. Sovereign Spreads of Single-B Rated Countries: Actual vs Model-Fitted



Sources: Bloomberg, JP Morgan, and IMF staff calculations.

8. While both domestic and global covariates are important determinants of spreads, a sizeable effect comes from the interaction of global risk aversion and a country's risk rating.

- Most variables are significant at least at the 10 percent level and all the coefficients have the expected sign (Table 3, column 1)—for example, an increase in the domestic GDP growth rate is associated with around 13 basis points decline in sovereign spread. A higher inflation rate and higher government debt are associated with higher spreads, while a higher current account balance, a higher governance index, a higher level of reserves, and being a commodity exporter are associated with lower spreads.

- Among the global covariates, a one percentage point higher global growth rate is associated with a 28 basis points lower sovereign spread. The MOVE index is positively related to sovereign spreads, as expected, since a higher MOVE index is considered to signal increased risk and uncertainty.

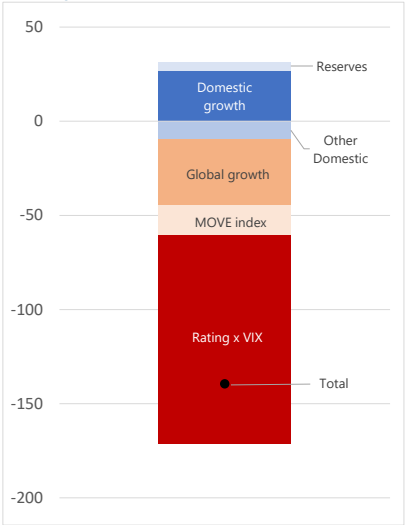
- Global risk aversion has an asymmetric effect, with lower rated countries experiencing disproportionately higher widening of spreads if global risk sentiment deteriorates. A country with an "A" or "BBB" rating only faces a marginally or insignificantly higher spread than a "AAA" or "AA" rated country. At the median level of the VIX in the sample, which is an index of 17, a country with an "A" rating faces an about 19 basis points higher spread than with a better rating grade ("AAA"/"AA"). This number rises to about 66 basis points for a "BB" rated country, and to 269 basis points for a "B" rated country like The Bahamas. The lowest rating grade in the sample, "CCX", denoting default, is associated with a 663 basis points higher spread compared to the "AAA"/"AA" rating group, at the median level of the VIX index.

- Inclusion in bond indices like the EMBIG could lower sovereign spreads, for example through increasing the available investor base. The spreads in The Bahamas would have compressed by 56 basis points compared to other countries with similar fundamentals if the archipelago were included in JP Morgan's EMBIG index (Emerging Market Bond Index Global).

9. Most of the recent model-explained decline in Bahamian spreads is due to reduced market volatility and an improved global risk sentiment (Figure 3). A decomposition of the change in the fitted spread of The Bahamas between January 2023 and March 2024 shows that the interaction term between the sovereign rating and the VIX index contributed a reduction of over 100 basis points of the total 140 basis points decline. Since the sovereign rating of The Bahamas remained unchanged over this period, the decline is fully attributable to the decline in the VIX index. Similarly, the decline in the MOVE index accounts for about another 20 basis points of the decline. An increase in the global growth outlook lowered the fitted spread by around another 40 basis points. In contrast, a moderation in Bahamian GDP growth and a slight decline in reserves imply an increase in the fitted spread by about 30 basis points.

Figure 3. Decomposition of Change in Model-Implied Spread, January 2023 to March 2024

(Basis points)



Source: IMF staff calculations.

10. Bahamian external sovereign spreads could decline by 65 to 240 basis points by 2029, if there is a rating upgrade from sustained and credible fiscal efforts (Figure 4). Two illustrative scenarios are constructed with assumptions for domestic (staff baseline projections) and global variables (staff baseline projections and historical averages).

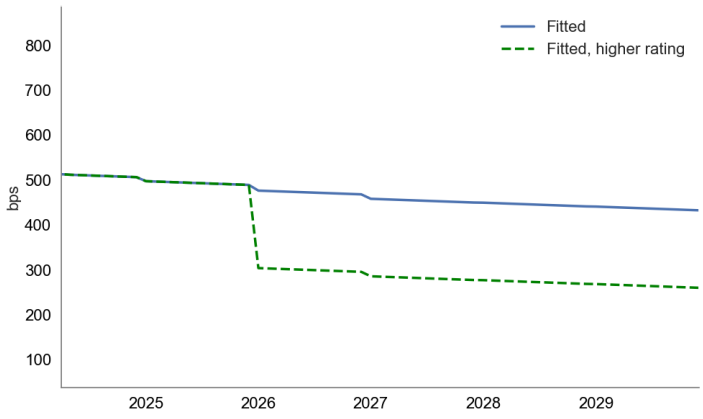
- *Unchanged sovereign rating.* Under the assumption of an unchanged sovereign rating, the fitted value declines to about 430 basis points by the end of 2029, or a reduction of 65 basis points

compared to March 2024. A large part of the projected reduction (45 basis points) is driven by the assumed decline in the MOVE index to historical averages.

- *Higher rating.* Under the scenario with rating upgrade by one notch, the fitted value declines by an additional 175 basis points, implying a spread of about 260 basis points by 2029, a level close to the pre-pandemic period. Since rating upgrades are often linked to improvements in a country's macroeconomic fundamentals and its fiscal situation, this suggests that an appropriate domestic policy mix can lead to substantial drop in spreads and funding costs.

Figure 4. Projected Spread

(Basis points)



Source: IMF staff calculations.

11. The reported findings are generally robust to different model specifications. For robustness checks, the baseline model of equation (1) is extended to the following:

$$spread_{it} = \alpha + e_i + \tau_t + X_{it}\beta + Z_t\gamma + D_{it}\delta + \sum_k \omega_k rating_{it}^k \, x \, VIX_t + \epsilon_{it} \qquad (2)$$

Relative to the baseline model, country fixed effects e_i and time fixed effects τ_t are included, and eight additional specifications are estimated (Table 3). Coefficients are generally stable, even in specifications where country or time fixed effects are added. The dummy for inclusion in the EMBI is notably more negative in specifications with country fixed effects (5, 7, 9), and once sovereign credit ratings are excluded as covariates (8, 9). This could be due to limited variation of EMBIG inclusion within countries. The dummy for an active IMF program loses significance for some specifications that include country fixed effects (5, 9), and changes sign in a specification excluding sovereign ratings (8). The latter could reflect that, on average, countries with an active IMF program have lower sovereign ratings, and lower sovereign ratings are found to be associated with higher sovereign spreads. For specifications excluding sovereign ratings from the model (8, 9), it stands out that the coefficient on public debt is generally larger, by as much as a factor of ten. However, at the same time, model fit as measured by the adjusted R-squared metric declines.

E. Annex

Table 1. The Bahamas: Variable Description and Sources

Variable name	Description	Unit	Source	Comment
Spread	Sovereign bond spread	Basis points	Bloomberg Finance L.P., JPMorgan, IMF Spread Monitor	The reference rate is based on US Treasuries, or the default of the index provider (Bloomberg, JPMorgan)
GDP Growth	Real GDP growth	Percent, yoy	IMF, Consensus Economics	
Inflation	CPI inflation rate	Percent, yoy	IMF, Consensus Economics	
CA Balance	Current account balance (share of GDP)	Percent	IMF, National sources	
Governance	Governance index		World Bank Worldwide Governance Indicators	Simple average of World Bank regulatory quality and government effectiveness
Debt	Public debt (share of GDP)	Percent	IMF	
Ext. Debt	External public debt (share of GDP)	Percent	Haver, BIS, IMF	
Reserves	Currency reserves (share of GDP)	Percent	Haver, IMF	
Rating: AAA/AA, A, BBB, BB, B, CCC, CCX	Sovereign credit rating		Bloomberg Finance L.P., S&P, Fitch, Moody's	Median of S&P, Fitch, and Moody's. Grades AAA and AA are combined. CCX denotes rating grades below CCC.
Comex	Dummy for commodity exporter		IMF	
EMBIG	Dummy for inclusion in JP Morgan EMBIG index		Bloomberg Finance L. P.	
IMF	Dummy for active IMF lending program		IMF MONA	Includes SBA, SCF, EFF, ECF, and respective predecessor programs. Both completed and cancelled programs.
Dollar	Dollar index (DXY)		Bloomberg Finance L. P.	
Global Growth	Global GDP growth	Percent, yoy	IMF, Consensus Economics	Forward looking weighted average using current year and 1-year forward (e.g., later in the year will place higher weight on next year). Uses consensus surveys for US and China (60/40).
VIX	Chicago Board Options Exchange's Volatility index		Bloomberg Finance L. P.	
MOVE	Merrill Lynch Option Volatility Estimate index		Bloomberg Finance L. P.	

Source: IMF staff compilation.

Table 2. The Bahamas: Summary Statistics

Variable	Observations	Mean	Standard Deviation	Minimum	Median	Maximum
			Domestic Covariates			
Spread	12639	476.6	660.2	-3.9	305.4	12481.9
GDP Growth	12639	3.6	3.0	-23.5	3.7	21.6
Inflation	12639	6.1	8.3	-2.5	4.3	201.9
Debt	12611	52.8	26.3	0.0	50.0	158.1
CA Balance	12639	-1.6	7.5	-46.2	-2.0	37.8
Ext. Debt	12619	54.4	38.8	0.0	42.9	243.1
Reserves	12639	17.6	9.9	0.0	15.5	81.8
Governance	12639	47.3	18.6	4.2	48.1	88.4
			Global Covariates			
Dollar	232	89.1	9.3	72.4	89.8	110.8
Global growth	232	4.4	1.0	1.4	4.5	6.5
VIX	232	19.4	7.6	10.1	17.0	51.9
MOVE	232	84.3	30.5	42.7	75.2	209.9

Variable	Observations	Obs. with d=1	Countries with at least one d=1	Countries with at least one d=0	Total nr of countries
			EMBIG inclusion and IMF program dummies		
EMBIG	12639	11721	68	15	73
IMF	12639	2641	40	73	73

Source: IMF staff calculations.

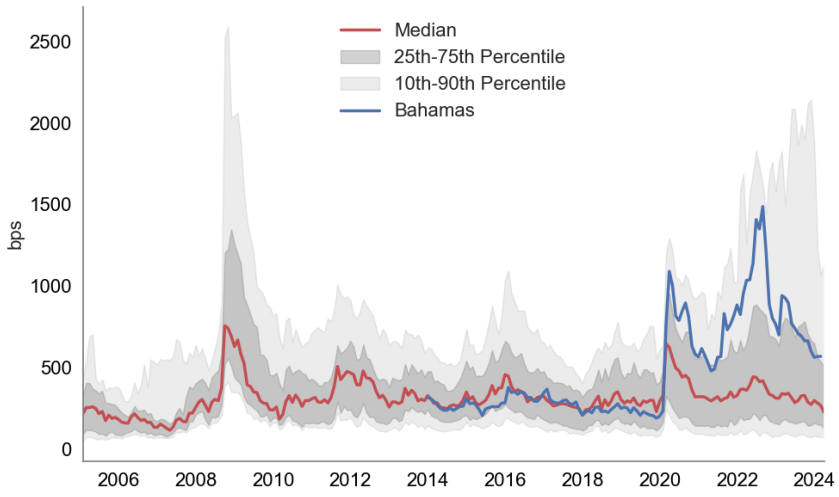
Table 3. The Bahamas: Regression Estimates

Variable	Baseline	Rating & VIX Separate	Domestic only	w/o EMBIG & IMF	with country FE	with time FE	w/ country & time FE	Baseline w/o rating	w/ c & t FE, w/o rating
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
GDP Growth	-13.23***	-14.25***	-17.12***	-13.58***	-8.71**	-13.05***	-11.29***	-18.13***	-13.67**
	(1.22)	*(1.26)*	*(1.72)*	*(1.22)*	*(3.99)*	*(3.58)*	*(3.85)*	*(1.51)*	*(5.99)*
Inflation	7.03***	6.28***	6.90***	6.78***	6.18***	6.88***	3.55***	10.57***	8.86***
	(0.47)	*(0.55)*	*(0.65)*	*(0.46)*	*(1.42)*	*(1.39)*	*(1.33)*	*(0.67)*	*(2.23)*
CA Balance	-2.70***	-2.93***	-2.82***	-2.53***	-1.32	-2.42**	-1.64	-2.43***	1.94
	(0.44)	*(0.42)*	*(0.44)*	*(0.42)*	*(1.81)*	*(1.22)*	*(1.97)*	*(0.44)*	*(1.49)*
Governance	-2.94***	-2.50***	-2.31***	-2.92***	-0.70	-3.28***	-0.59	-8.25***	-4.20
	(0.19)	*(0.23)*	*(0.26)*	*(0.22)*	*(4.07)*	*(0.87)*	*(4.25)*	*(0.19)*	*(4.63)*
Debt	0.35*	0.10	0.13	0.35**	4.76***	0.52	5.93***	2.69***	5.87***
	(0.18)	*(0.17)*	*(0.19)*	*(0.17)*	*(1.31)*	*(0.70)*	*(1.40)*	*(0.19)*	*(1.70)*
Ext. Debt		-0.01	-0.06	0.10	0.43	0.14	0.21		0.02
		(0.09)	*(0.09)*	*(0.09)*	*(1.38)*	*(0.34)*	*(1.28)*		*(1.89)*
Reserves	-4.12***	-4.14***	-3.91***	-4.08***	-3.19*	-4.53***	-3.41*	-6.37***	-3.60*
	(0.32)	*(0.27)*	*(0.30)*	*(0.30)*	*(1.86)*	*(1.36)*	*(1.87)*	*(0.31)*	*(1.92)*
Comex	-62.33***	-71.72***	-66.71***	-56.80***		-64.95**		-63.05***	
	(8.80)	*(8.38)*	*(8.48)*	*(8.99)*		*(25.51)*		*(7.55)*	
IMF	-32.76***	-37.75***	-29.73***		-47.30	-29.57	-40.69	57.60***	-16.56
	(7.91)	*(7.56)*	*(8.53)*		*(33.14)*	*(25.83)*	*(30.72)*	*(7.15)*	*(32.04)*
EMBIG	-55.80***	-54.13***	-36.07***		-98.44**	-47.66	-141.80***	-142.45***	-125.07***
	(5.70)	*(6.47)*	*(7.14)*		*(43.30)*	*(42.17)*	*(40.50)*	*(7.36)*	*(33.12)*
Global Growth	-27.97***	-23.60***		-29.29***	-34.91***			-12.91**	
	(5.62)	*(5.32)*		*(5.89)*	*(7.96)*			*(5.47)*	
Dollar		0.71		-0.38	-1.15				
		(0.64)		*(0.68)*	*(1.74)*				
VIX		9.71***						9.19***	
		(0.63)						*(0.61)*	
MOVE	1.04***	0.78***		1.04***	1.40***			1.16***	
	(0.18)	*(0.17)*		*(0.18)*	*(0.34)*			*(0.20)*	
A x VIX	0.98**			0.80*	-0.68	-1.03			
	(0.43)			*(0.44)*	*(1.48)*	*(1.88)*			
BBB x VIX	0.36			0.16	1.56	-2.12			
	(0.55)			*(0.54)*	*(1.57)*	*(1.68)*			
BB x VIX	3.94***			3.62***	4.35***	1.46			
	(0.55)			*(0.56)*	*(1.37)*	*(1.88)*			
B x VIX	15.89***			15.42***	13.03***	12.90***			
	(0.82)			*(0.83)*	*(1.96)*	*(2.56)*			
CCC x VIX	35.93***			35.65***	30.70***	32.69***			
	(1.85)			*(1.84)*	*(6.99)*	*(6.59)*			
CCX x VIX	38.94***			38.37***	37.91***	36.30***			
	(2.47)			*(2.45)*	*(9.97)*	*(9.70)*			
A		-40.50***	-2.78				-67.45*		
		(8.64)	*(8.14)*				*(39.80)*		
BBB		-43.69***	-23.93***				-105.66		
		(7.48)	*(7.87)*				*(70.04)*		
BB		30.28***	56.04***				-56.15		
		(8.66)	*(9.40)*				*(77.49)*		
B		268.48***	289.95***				84.89		
		(11.83)	*(14.04)*				*(90.57)*		
CCC		705.14***	724.16***				476.45***		
		(34.00)	*(39.09)*				*(142.17)*		
CCX		841.19***	866.27***				762.54***		
		(48.86)	*(49.03)*				*(177.21)*		
Country FE	N	N	N	N	Y	N	Y	N	Y
Year FE	N	N	N	N	N	Y	Y	N	Y
Observations	11,916	11,916	11,916	11,916	11,916	11,916	11,916	11,916	11,916
Adjusted R2	0.60	0.61	0.55	0.60	0.38	0.58	0.30	0.45	0.12

Note: *, **, *** indicate statistical significance at the 10%, 5%, and 1% levels; standard errors (se) are robust standard errors to correct for potential heteroskedasticity

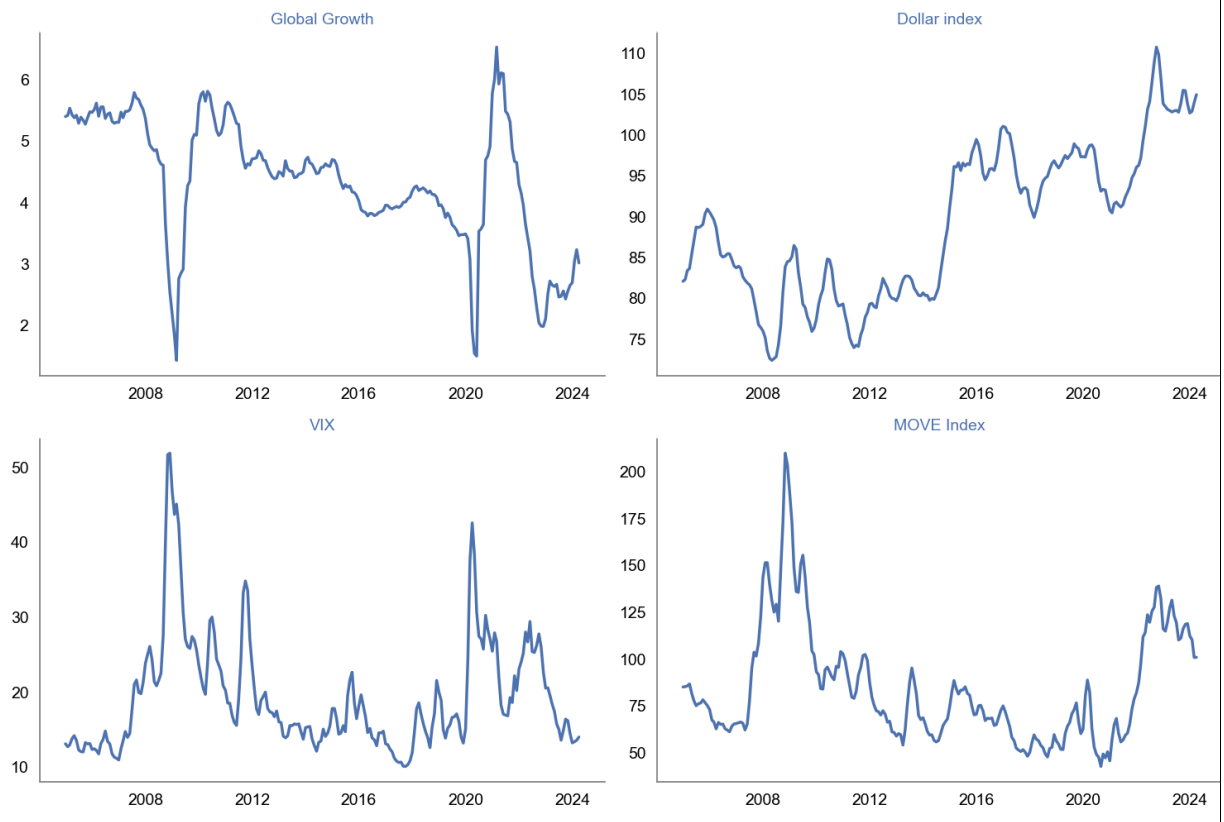
Source: IMF staff calculations.

Figure 5. Sovereign Spreads: The Bahamas and Sample Percentiles



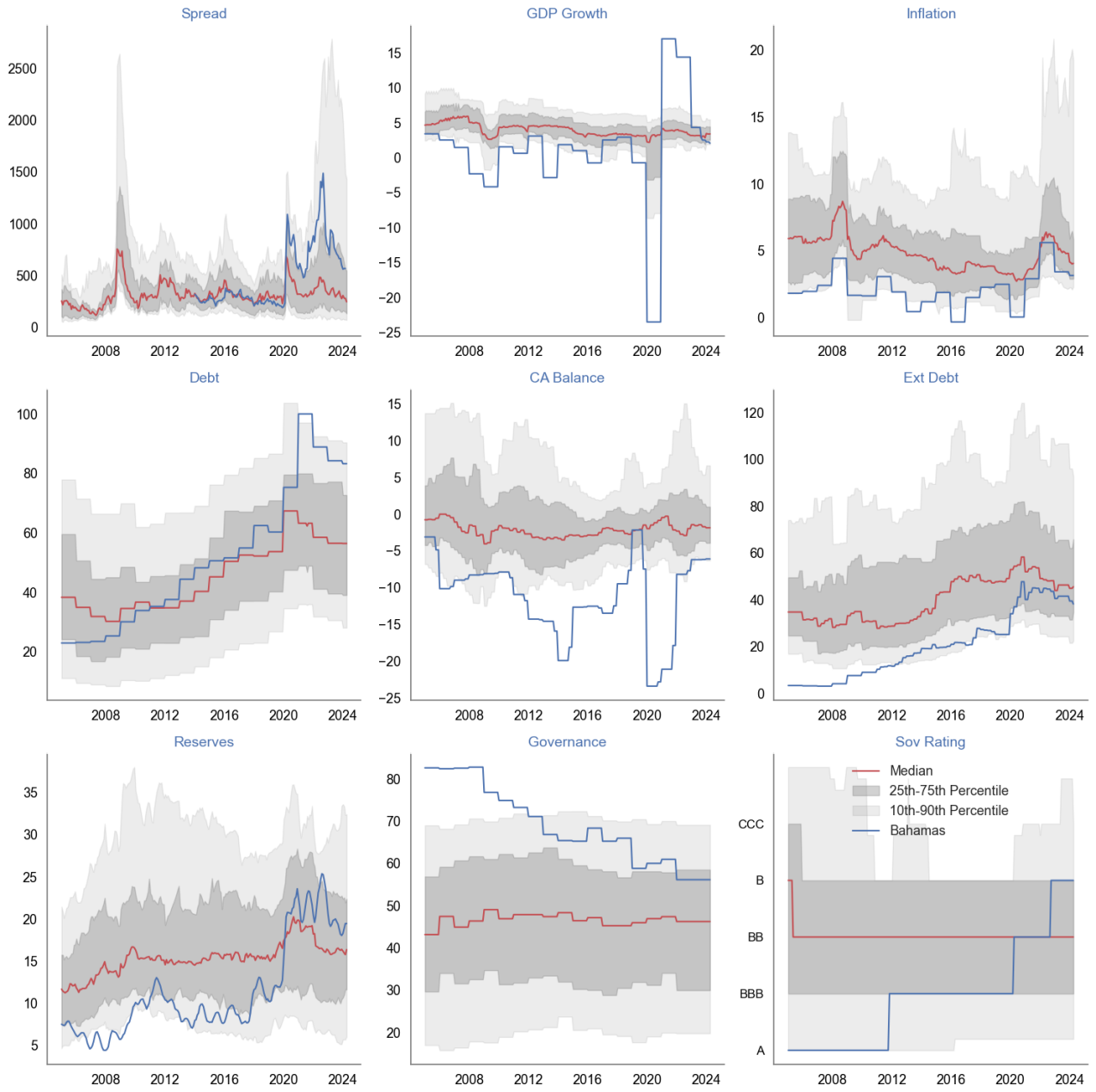
Sources: Bloomberg Finance L.P., JPMorgan, and IMF staff calculations.

Figure 6. Global Covariates



Sources: Bloomberg Finance L.P., Consensus Economics, and IMF staff calculations.

Figure 7. Domestic Covariates



Sources: Bloomberg Finance L.P., JPMorgan, Consensus Economics, World Bank, Haver, BIS, S&P, Fitch, Moody's, National authorities, and IMF staff calculations.

References

Belhocine, N., & Dell'Erba, S. (2013). The Impact of Debt Sustainability and the Level of Debt on Emerging Markets Spreads. IMF Working Papers 2013/093, International Monetary Fund.

Bellas D., Papaioannou, M. G., & Petrova, I. (2010). Determinants of Emerging markets sovereign bond spreads: fundamentals vs financial stress. IMF Working Paper, No. 10/281.

Csonto, B., & Ivaschenko, I. V. (2013). Determinants of Sovereign Bond Spreads in Emerging Markets: Local Fundamentals and Global Factors vs. Ever-Changing Misalignments. IMF Working Papers 2013/164, International Monetary Fund.

Presbitero A. F., Ghura, D., Adedeji, O. S., Njie, L. (2015). International Sovereign Bonds by Emerging Markets and Developing Economies: Drivers of Issuance and Spreads. IMF Working Papers 2015/275, International Monetary Fund.