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Codified or Compromised: Correction Mechanism Design and Post- COVID Fiscal Recovery in Emerging Markets

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Introduction

The COVID-19 pandemic caused a major expansion in government spending worldwide, forcing many countries to either exceed or abandon their existing fiscal rules. Fiscal rules are limits on budget deficits, public debt, or government expenditure made to control long-term fiscal discipline and reassure investors about the stability of public finances. However, the scale of the pandemic shock meant that following these rules was not feasible. The governments of Emerging Markets and Developing Economies (EMDEs) chose to prioritize economic stabilization over meeting fiscal targets as emergency expenditure surged exponentially.

Most fiscal frameworks include escape clauses that allow governments to deviate from fiscal rules temporarily. These are exercised during extraordinary events such as recessions, financial crises, or natural disasters. Escape clauses serve to provide fiscal flexibility, specifying that deviations should be temporary and followed by a return to pre-crisis rules as conditions ease. During the COVID-19 crisis, most countries formally invoked these clauses, effectively suspending fiscal constraints to accommodate emergency spending. The activation of escape clauses raises an important question about fiscal credibility, that is, how quickly and credibly governments return to fiscal discipline after the crisis. Correction mechanisms strengthen escape clauses by

dictating how and when countries return to pre-crisis fiscal rules. In this policy proposal, we use the reference of the escape clause and the subsequent reliance on correction mechanisms to measure fiscal discipline.

Literature Review

Early literature has already established that numerical restrictions on government spending & borrowing have a positive correlation to fiscal outcomes (Kopits & Symansky, 1998; Debrun et al., 2008. Kopits & Symansky 1998) gave its conceptual foundation, arguing that effective fiscal rules must be well-defined, transparent, enforceable, and also flexible enough to accommodate economic shocks. Future empirical results also confirmed the argument that countries with fiscal rules tend to run lower deficits and accumulate lesser debt over time (Badinger & Reuter, 2017, Nelrich & Reuter, 2013, Wyplosz, 2012, Schaechter et al., 2012). Davoodi et al. (2022) documented the global proliferation of fiscal rules across 123 countries from 1985 to 2021. The adoption of fiscal rules is positively correlated with better fiscal performance; however, they also noted that compliance with these fiscal rules was uneven across countries and these rules did not necessarily translate into implementation.

Schaechter et al. (2012) examines the design quality by constructing a detailed dataset of fiscal rule characteristics and show that design features like legal basis, coverage, monitoring, and enforcement might even be more important than simply the presence of these rules. These findings further motivated works on what Eyraud et al. (2018) call second-generation fiscal rules, frameworks which explicitly balance simplicity, flexibility and enforceability of these rules. Eyraud et al. (2018) identified the important design dimensions: well-defined escape clauses which allow for suspension in times of crises, a correction mechanism on how and when must the government return to

compliance after deviation, and lastly existence of independent monitoring bodies that enforce accountability. Their central argument is that escape clauses without a relevant correction mechanism are institutionally incomplete, as they would provide the flexibility to deviate but would not provide a credible return path.

Nerlich & Reuter (2013) created a time-varying index for fiscal framework quality for 27 EU member states, and then estimated its impact on primary balance outcomes. They found strong evidence to support that the quality of fiscal rules is positively correlated with better primary balances.

COVID-19 created a natural test of resilience for these fiscal rules. Davoodi et al. (2022) document that the pandemic led to a widespread activation of the escape clause with the fiscal deficit reaching historic highs for most of the countries (IMF, 2021). Even after five years many countries have not returned to their pre-COVID fiscal positions (Alonso et al., 2025, IMF, 2024). This motivates the question: what institutional features may support a faster recovery from such shocks? Despite the clear policy relevance, we could not find any study which examined whether the correction mechanism (specifically, whether the return path is codified with timelines & milestones) predicts post-COVID recovery across EMDEs?

Data

For our analysis, we have used a sample of 54 EMDEs¹. There are two primary data sources. The institutional data comes from the IMF Fiscal Rule Dataset 1985-2024 (Alonso et al. 2025), which codes correction mechanism characteristics for 123 countries. For our initial analysis we use two variables; Presence of Correction Mechanism (PCM, which takes values from 0: if correction mechanism is absent, 1: if correction mechanism is implemented after

¹ Four countries are excluded as they were outliers: Azerbaijan, Maldives, Mongolia, Saint Vincent and the Grenadines. See Appendix C for details.

escape clause trigger & 2: if correction mechanism is implemented before escape clause trigger) and Type of Correction Mechanism (TCM, which takes values from; 0: if absent, 1: if just return to rule limits are specified & 2: if return to rule limits are specified and cumulative deviation correction is required). Both variables are measured for 2019 to ensure they are strictly pre-COVID and thus cannot be endogenous to COVID and post-COVID situations. Hence, countries that introduced correction mechanisms during COVID or post-COVID are coded as 0 for both variables.

For West African Economic and Monetary Union (WAEMU) countries, a supranational correction mechanism is used as they lack individual national correction mechanisms. The fiscal data used comes from the IMF WEO Database. We have borrowed the approach used by Nerlich and Reuter (2013), and used the general government primary balance to construct our outcome variable as it isolates discretionary fiscal adjustments from the interest payment obligations (which are outside the control of the government).

Methodology, Results & Future Expansion

For our initial analysis, we use the following regression equation:

$$\text{pbd} = \alpha + \beta_1 \text{PCM}_{2019} + \beta_2 \text{TCM}_{2019} + \gamma_1 \text{PrimaryBalance}_{2019} + \gamma_2 \text{Debt-to-GDP}_{2019} + \epsilon$$

Where, pbd is the deviation of primary balance as a % of GDP in 2023 from the minimum primary balance of 2020-2022, capturing each country's adjustment from the COVID period and back towards fiscal normalcy. Furthermore, this measure would capture recovery rather than fiscal position levels. The 2019 Primary Balance as a % of GDP & Debt-to-GDP have been included as controls to account for the pre-COVID fiscal starting point.

The results² show that the coefficient of the TCM is positive and statistically significant at 1% level (coefficient = 2.61), while the coefficient for the PCM was statistically insignificant. Countries with higher TCMs recovered on average 2.61 pp more than the countries with lower

² See Appendix B for the regression results table.

types. This suggests that the mere presence of a correction mechanism is insufficient for recovery to fiscal discipline: the essence lies in the specification of a codified return path.

The overall model was also significant at a 5% level, with an R-score of 0.235, which is consistent with previous fiscal rules literature (Nelrich & Reuter, 2013) where the country specific factors are the ones that account for a larger share of variation in a country's fiscal outcomes. There is a negative and significant coefficient on the 2019 primary balance, which implies that countries that started with a stronger fiscal position recovered less in absolute terms. This also implies a mean reversion pattern, where the countries that fell the furthest had more ground to recover. Debt-to-GDP is also insignificant, suggesting that initial levels of debt do not predict recovery speed once the correction mechanism design is accounted for.

Breaking down mean primary balance recovery by TCM categories³, we see that countries with no codified return path ($TCM = 0$) recovered on an average of 3.83pp of primary balance from COVID by 2023. Countries with a specified return to rule limits ($TCM = 1$) recovered just a little bit more at 4.08pp. However, the countries that were also required to correct for cumulative deviation ($TCM = 2$) recovered an average of 7.13pp which is significantly more recovery than other two types. This non-linear pattern shows that the effect of the correction mechanism on fiscal policy is concentrated at the highest level of design stringency, where the government faces both an obligation to return to the rule limit and compensates for every year of accumulated deviation from these rule limits.

This proposal's stage analysis has established a robust association between the correction mechanism design and post-COVID recovery across 50 EMDEs. The full study aims to extend this into ways that would directly address the limitations of the current analysis' limitations. The robustness of the correction mechanism coding can be improved through a validation against IMF Article IV staff report for each country in the sample. This is because the current analysis relies on the IMF Fiscal Rules Dataset, which is based on the legislative texts of the countries and may not capture if the mechanism was active in 2019.

The IMF Article IV provides a country analysis of the implementation of fiscal frameworks,

³ See Appendix E for the bar chart.

which might help the analysis by isolating the impact of implementation of the mechanism from its formal design in the legislative text, particularly for countries with a large gap.

Policy Suggestions and Conclusion

In our analysis, with a breakdown of mean primary balance recovery by TCM categories, we see that countries with a cumulative deviation requirement ($TCM = 2$) returned almost double of the primary balance of countries with a basic return path ($TCM = 1$). This non-linear result implies that the minimum acceptable standard correction mechanism design should be a cumulative deviation correction, not a mere specified return to rule limits. The IMF could require this in its fiscal framework design guidance. Countries and economic unions can adopt this type of correction mechanism for their fiscal frameworks. We suggest the establishment of $TCM = 2$ as the global minimum standard for a correction mechanism design.

The WAEMU framework⁴ The dataset highlights a problem with the supranational framework in EMDE's. Even though the WAEMU has a correction mechanism on paper, it lacks codified return timelines, rendering it operationally ineffectual. The East African Monetary Union (EAMU) suffers from a worse problem as it does not have a correction mechanism to begin with. Such regional supranational institutions need to revise their convergence frameworks to accommodate cumulation deviation correction obligations with enforceable timelines. This gains importance since these institutions are responsible for the fiscal management of multiple EMDE's. By compromising on well-defined rules, these institutions are jeopardizing already precarious EMDE's.

Moreover, the dataset shows that the majority of the EMDEs in our sample fall in the $TCM = 0$ or 1 , implying a widespread institutional gap among EMDEs. IMF technical

⁴ See Appendix A for coding.

assistance programs, which are focused on fiscal framework reforms, could help governments in EMDEs to legislate correction obligations, specifying objectives like timeline milestones and compensation for accumulated deviation.

Taken together, the evidence presented here argues for a fundamental rethinking of how fiscal frameworks are evaluated in the wake of major shocks. The COVID-19 pandemic revealed not just the fiscal vulnerability of EMDEs, but a structural weakness in their institutional architecture, the widespread absence of credible and codified return paths from fiscal deviation. Filling this gap, by moving from representative correction mechanisms to ones with enforceable, cumulative obligations, is not merely a technocratic refinement. It's a necessity for building the kind of fiscal credibility that allows EMDE's to absorb shocks, protect investor sentiment, and sustain the long-term growth trajectories required. In an unpredictable global environment the quality of fiscal correction mechanisms may well prove to be one of the most consequential determinants of macroeconomic resilience.

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Appendix A — Country Sample and Correction Mechanism Coding

Here is the list of all the countries in the sample;

Country	PCM	TCM
Angola	0	0

Honduras	1	1
Hungary	0	0
India	2	0
Jamaica	1	2

Senegal	1	0
Serbia	0	0
Solomon Islands	0	0
Sri Lanka	0	0

1. PCM is the Presence of Correction Mechanism as coded in the IMF Fiscal Rules Dataset (Alonso et al., 2025) as (Yes, based on ex-post deviations: 1; Yes, based on preventive measures before the rules are breached: 2; No: 0).
2. TCM is the Type of Correction Mechanism as coded in the IMF Fiscal Rules Dataset (Alonso et al., 2025) as (Yes, if the requirement(s) to return to the rule limits are specified: 1; Yes, if the requirement(s) to correct for cumulative deviations from the rules are specified; 2; No: 0).
3. All Institutional Variables (TCM & PCM) are coded as of 2019 in order to reflect pre-COVID Fiscal Framework which was in place at the time of the shock, to avoid endogeneity. Hence, countries that introduced a correction mechanism in

or after 2020 have been coded as PCM = 0 & TCM = 0. This also avoids reverse causality as doing so includes countries for which such a framework was added because of COVID.

4. WAEMU member countries are coded as PCM = 1, TCM = 0. This is because while the WAEMU supranational framework includes a correction mechanism, it does not explicitly specify a correction timeline or milestones. Hence, they do not even meet the threshold for TCM = 1.
5. Azerbaijan, Maldives, Mongolia and St. Vincent & the Grenadines, are included in the full sample regression in Appendix C, but excluded from the final regression. See Appendix C for the justification of the same.

Appendix B — Regression Results Table

Table 1: Regression Results

	(1) pbd	(2) pbd
PCM ₂₀₁₉	-1.490 (1.041)	-1.269 (0.761)
TCM ₂₀₁₉	1.969 (1.219)	2.611*** (0.894)
PrimaryBalance ₂₀₁₉	-0.033 (0.130)	-0.232** (0.104)
Debt-to-GDP ₂₀₁₉	0.018 (0.021)	0.021 (0.016)
Constant	3.168** (1.247)	2.244** (0.930)
Observations	54	50
R^2	0.078	0.235
Adj. R^2	0.003	0.167
F-statistic	1.04	3.46

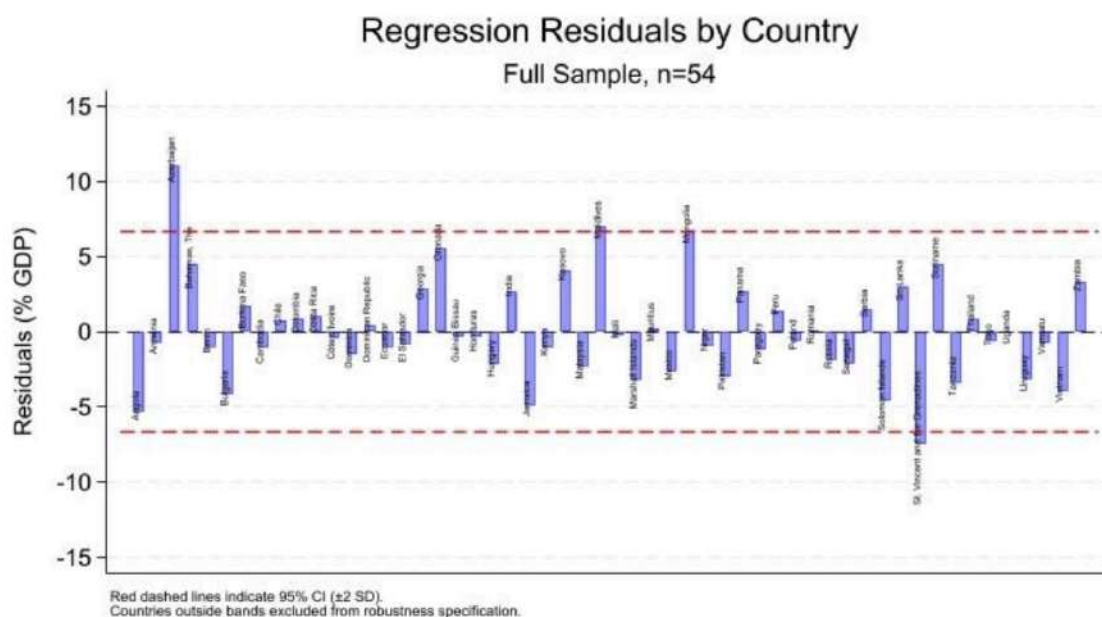
Standard errors in parentheses.

** $p < 0.01$, * $p < 0.05$, $p < 0.1$

Table B shows the results of the OLS regression for both specifications as implied in Appendix A & C. Column 1 shows the result for the full sample of the 54 EMDEs and

Column 2 excludes 4 countries (Azerbaijan, Maldives, Mongolia and St. Vincent & the Grenadines) with some sort of idiosyncratic shock (See Appendix C for further justification on the same).

Appendix C — Outlier Justification



The above graph plots the regression residuals for all of the 54 countries in the sample with the red dashed lines marking the 5% confidence interval (± 2 standard deviation). Under the assumption of normally distributed residuals, 95% of the observations must fall within these bands. So, the countries falling outside these bands represent cases where the model fit is significantly poor.

Four countries fall outside the 95% Confidence bands; Azerbaijan, Maldives, Mongolia, and St. Vincent and the Grenadines. We can also give economic justifications for their exclusion as their fiscal dynamics during 2020-2023 were driven by some kind of idiosyncratic shocks,

which is entirely unrelated to the design quality of the correction mechanism. Hence, including will bias the results by including exogenous country-specific shocks.

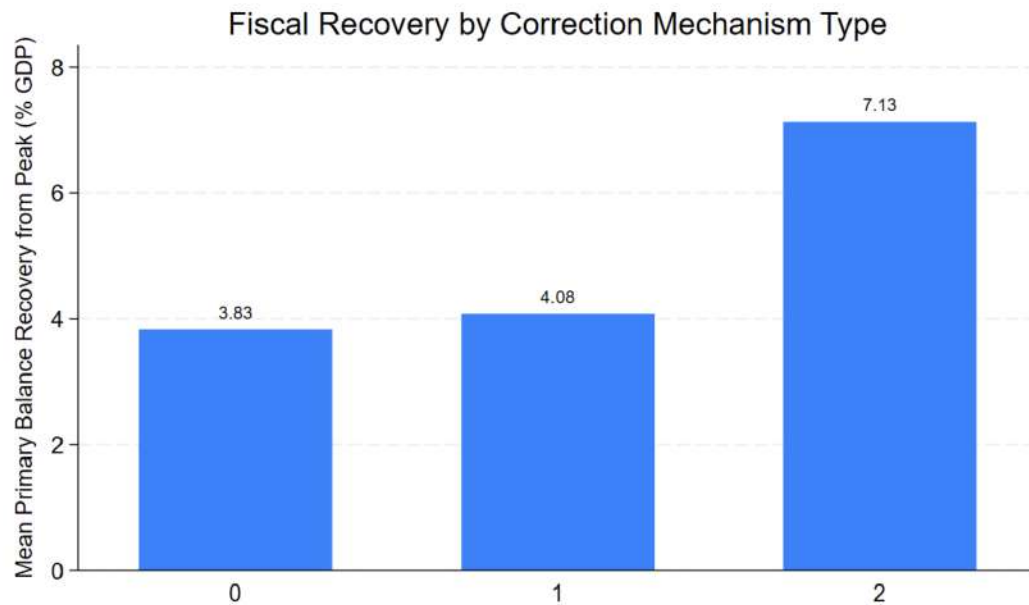
Country	Residual	Reason for Exclusion
Azerbaijan	+10.9	Oil-dominated fiscal position driven by commodity price cycles
Maldives	+6.9	Idiosyncratic tourism collapse due to international travel restrictions
Mongolia	+6.6	Commodity-dependent fiscal position driven by copper and coal price cycles
St. Vincent and the Grenadines	-7.5	La Soufrière volcanic Eruption April 2021 causing fiscal emergency

Appendix D — Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
pbd	54	3.99	3.50	-3.02	14.23
pb2023	54	-1.19	3.53	-10.26	9.50
pb2019	54	-0.67	3.99	-17.35	9.65
dtg2019	54	52.38	23.20	7.82	103.33
pcmi	54	0.39	0.56	0	2
tcmi	54	0.22	0.50	0	2

The table above shows the descriptive statistics for all the variables used in the regression for all the 54 countries in the sample with escape clause in their national fiscal framework as of 2019.

Appendix E — Bar Chart of the breakdown of mean primary balance recovery by TCM



The above graph shows the breakdown of mean primary balance recovery by TCM categories; we see that countries with no codified return path (TCM = 0) recovered on an average of 3.83 pp of primary balance from COVID by 2023. Countries with a specified return to rule limits (TCM = 1) recovered just a little bit more at 4.08pp. However, the countries that were also required to correct for cumulative deviation (TCM = 2) recovered an average of 7.13pp which is significantly more recovery than other two types.



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