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

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CODIFIED OR COMPROMISED: CORRECTION MECHANISM DESIGN AND POST-COVID FISCAL RECOVERY

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Abstract

When a government breaks its own fiscal rules to survive a crisis, what makes anyone believe it will go back? For most emerging and developing economies (EMDEs), the answer is: nothing does. Of the 54 EMDEs with an active escape clause heading into COVID-19, 81% had no legally binding path back to fiscal discipline, just a promise to eventually sort it out. This paper tests whether writing that promise into law actually matters. Using IMF Fiscal Rules Dataset coding locked in before the pandemic, we compare countries with a codified correction mechanism to those with one in name only, and find that codified countries clawed back 2.7 percentage points more of their primary balance from the COVID trough than otherwise-similar countries without one, while a mechanism with no specified return path buys nothing i.e. its effect is statistically indistinguishable from zero. The advantage doesn't come from harsher post-crisis austerity, since expenditure, revenue, and debt adjustments show no effect, but from before the crisis hit: codified countries simply ran larger surpluses going in. A probit model adds a troubling wrinkle — codification tracks income, not need, so the countries least likely to write the rule down are the ones most exposed to the next shock.

Keywords: Fiscal rules, escape clauses, correction mechanisms, sovereign credibility, primary balance, COVID-19, EMDE, debt sustainability, fiscal buffers

JEL Codes: E62, H12, H60, H63, O23

1. 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.

The paper proceeds as follows: The next section reviews contemporary literature to establish the need for this kind of study for EMDEs. The following section discusses the channels through which fiscal rules impact the economy. We then move on to the data section which talks about how we used existing datasets for our regression analyses. The methodology section explains our two main regressions and the subsequent robustness check. We move on to examine the results and conclude with policy implications for EMDEs.

2. LITERATURE REVIEW

The theoretical motivation of fiscal rules as a response to deficit bias (The systematic tendency of the government to overspend relative to the social optimum) come from Alesina and Passalacqua (2016), who trace this bias to the electoral incentives and intergenerational redistribution. Halac and Yared (2018) further formalized in a mechanism design framework where the governments were present-biased spending, so fiscal rules are deficit limits that tradeoff commitment against flexibility. Furthermore, the time-inconsistency literature coming from Kydland and Prescott (1977) which provided the foundational argument that rules (such as the fiscal rules) dominate discretion when governments cannot credibly bind future policies. Now, this set of literature establishes the theoretical case for numerical fiscal constraints but do not talk about how these constraints should be designed.

The empirical literature on fiscal rule design and outcome is largely pre-COVID and is concentrated mostly on advanced economies. Nerlich and Reuter (2013) construct a panel dataset of national fiscal frameworks for 27 European Union (EU) member countries over 1990-2012 and found that the design feature of fiscal rules (like legal biases, enforcement mechanisms, & supporting institutions) significantly predict primary balance outcomes, with the effect being strengthened by independent fiscal councils & medium term budgetary frameworks. Reuter (2015) further extends this by examining fiscal space, finding that the rules build buffers that the governments can draw on during economic downturns. Outside the EU such evidence is limited. A broader literature review done in Combes et al. (2024) finds that the fiscal rules are associated with improved budgetary balance and lower public spending volatility; however, the compliance with these rules remain widely inconsistent and the effects vary substantially with rule design and enforcement capacity.

Moving to the literature specifically focusing on the escape clauses of these fiscal rules. Eyraud et al. (2018) provide a really detailed analysis of escape clause design, within what they call second-generation fiscal rules. So, here they argue that well

designed escape clauses must not only specify the terms of activation, but rather also specify a path to return to fiscal rules after an escape from these rules. This return path is called a correction mechanism.

The COVID-19 pandemic provided an unanticipated test of the fiscal frameworks. Davoodi et al. (2022) documented that the escape clauses were widely triggered in 2020 and deviations from fiscal rule limits were large and widespread. Then, Alonso et al. (2025) updated this analysis and found that even five years after the widespread activation of the escape clauses, deficits and debt in many countries continue to exceed the rule limits, identifying the absence of a robust correction mechanism as a central design failure.

The most direct evidence on correction mechanism design comes from Acalin et al. (2025), who use synthetic controls methods, & dynamic panel regression that fiscal rules with robust correction mechanisms, defined as rules with prespecified consolidation triggers & adjustment measures, which is different from the one used in this paper, reduce sovereign spreads by 25% after one year in six countries (mostly advanced economies). This result is consistent with the credibility channel whereby codified return paths signal fiscal commitment to markets. However, it is to note that their sample is small and confined to mostly advanced economies.

The literature reviewed above has established three things. First, fiscal rules reduce the deficit bias and improve primary balance outcomes when well designed. Second, escape clauses are now nearly universal and were widely activated during COVID. Third, correction mechanisms reduce sovereign spreads in advanced economies through a credibility channel. What the literature has not examined is whether correction mechanism codification (the legal mandating of a return path as opposed to its mere presence on paper) predicts the speed of fiscal recovery following a large common shock in EMDEs. This distinction matters because, as our descriptive analysis shows, 81% of EMDEs with escape clauses have no codified return path, meaning the design gap is not marginal but systemic. We contribute to this literature by providing the first cross-country empirical test of this question, using COVID as an exogenous stress test,

the IMF's TCM variable to operationalise codification, and a sample restricted to the 54 EMDEs for whom the design question is institutionally relevant.

3. CHANNELS

3.1 THE POLITICAL ECONOMY CHANNEL

Fiscal rules are commitment devices, which work by raising the reputational cost of deviations from these rules, hence constraining the deficit bias that emerges when governments discount future fiscal costs relative to current spending benefits (Halac and Yared, 2018). Halac and Yared (2014) show that when shocks are persistent rather than transitory, the optimal rule tightens the limits on discretion, since a government that can plead a long-lived shock has more room to justify continued deviation. A common, persistent shock like COVID-19 is exactly the case their model implies a codified return path should guard against. An escape clause introduces a controlled flexibility into this commitment device, allowing for deviation from these rules under predefined circumstances without formally abandoning these rules. However, the credibility of this flexibility depends on what happens after the deviation occurs. If exit from deviation is discretionary, the escape clause weakens the commitment value of the rule as a whole. Governments anticipating that future correction is optional have weaker incentives to maintain fiscal discipline during normal times, since the cost of falling below the target is limited to the period of deviation itself.

A codified correction mechanism changes this by legally mandating a return path; it transforms the future cost of current deviation from a reputational risk into a binding legal obligation. So, a government that deviates today must compensate for that deviation in future periods, regardless of political conditions at the time. This prospective obligation raises the effective cost of running a deficit in normal times, even before any shock has occurred. Rational governments anticipating this cost have an incentive to maintain a fiscal position above the minimum required by the rule, building a buffer that reduces the likelihood of triggering the correction obligation in the first place.

3.2 THE CREDIBILITY CHANNEL

The political economy mechanism operates through domestic incentives. A complementary channel operates through financial markets. Acalin, Martinez and Roch (2025) show that robust correction mechanisms reduce sovereign spreads by approximately 25%, consistent with the view that codified return paths are interpreted by markets as a signal of fiscal commitment. Lower sovereign spreads reduce the borrowing cost of running a deficit. Also, they reduce the cost of maintaining a surplus, making it cheaper for governments to build and sustain pre-crisis fiscal buffers. The two channels are therefore mutually reinforcing; codification raises the domestic cost of deviation while simultaneously lowering the market reward for fiscal discipline.

3.3 THE BUFFER MECHANISM

Both channels converge on the same prediction. Countries with codified correction mechanisms should, in normal times, maintain higher primary balances comparable to countries without these mechanisms, not because the rule requires it, but because the forward-looking cost of deviation is higher. We call this the buffer: the margin above the fiscal rule target built during normal times as a rational response to the correction obligation.

When a large common shock arrives (as it did with the COVID-19 pandemic), this buffer determines the depth of the fiscal trough. A country entering the shock with a primary surplus faces a shallower trough than one entering at a primary deficit, even if both receive the same shock. A shallower trough means a shorter recovery path to any given target level, and therefore faster measured recovery. Hence, this mechanism predicts that the effect of TCM codification should operate entirely through pre-crisis positioning and not through how countries adjust during the crisis itself. This prediction is directly testable through channel regressions on crisis-period expenditure, revenue, and debt outcomes.

4. DATA

Our analysis is from a sample of 54 EMDEs, and the selection was made based on whether they have an active escape clause in their national fiscal framework as of 2019. By limiting the sample to countries that have the legal framework to deviate from the fiscal rules, we ensure that they are comparable, that is, every country in the sample faces the same institutional choice of whether to codify a return path or not. Four countries, namely, Azerbaijan, Maldives, Mongolia, and St. Vincent and the Grenadines, are excluded from the main specifications as idiosyncratic shocks unrelated to correction mechanism design dominated their fiscal dynamics during the 2020–2023 period, leaving a final estimation sample of 50 countries.

The institutional data comes from the IMF Fiscal Rules Dataset 1985-2024 (Alonso et al., 2025). From this we get out two core variables, the Presence of Correction Mechanism (PCM) and the Type of Correction Mechanism (TCM). PCM takes a value of 0 if no mechanism exists, 1 if the mechanism is triggered ex-post after a deviation has already occurred, and 2 if it operates preventively before the rule is breached. TCM captures the structure of the return path, and takes the value 0 if no codified return path exists, 1 if requirements to return to rule limits are specified, and 2 if the framework additionally requires correction for cumulative deviations — meaning any accumulated shortfall from targets must be compensated over time, not merely arrested going forward. Both these core variables are coded as of 2019, pre-COVID, ensuring that they cannot be endogenous to the pandemic shock or its aftermath.

The macroeconomic variable comes from the IMF World Economic Outlook database. The outcome variable, **pbd**, is defined as the difference between the 2023 primary balance and the minimum primary balance that was recorded between the years 2020 and 2022. This helps us capture each country's recovery from its COVID era fiscal trough, rather than just its fiscal level. We also use debt-to-GDP at pre-pandemic levels as a control for initial fiscal vulnerability, and government revenue and expenditure aggregates to examine the channels through which any correction mechanism may operate.

Institutional quality and income-level controls are sources from the World Bank's World Development Indicators. Government effectiveness which is drawn from the Worldwide Governance Indicators, serves as a proxy for the broader institutional environment within which these fiscal rules operate. Log GDP per capita helps us capture the cross-country differences in economic development, which our probit analysis shows to be a significant predictor of correction mechanism adoption independently of debt levels of governance quality. Together, these three main data sources help us to separately identify the role of the correction mechanism framework.

5. METHODOLOGY

This study employs a two-stage empirical strategy to examine the relationship between the design of fiscal correction mechanisms and the recovery of primary balance post-COVID among EMDEs. The analysis proceeds in three steps: a probit model identifying the drivers of correction mechanism adoption, an OLS regression estimating the recovery premium associated with codification, and a robustness check that isolates the adjustment channel.

5.1 DRIVERS OF TCM ADOPTION (PROBIT MODEL)

Before estimating the effect of correction mechanism design on recovery, we first examine what predicts TCM adoption in the first place. This is important for understanding whether the treatment variable is endogenous to pre-existing fiscal conditions. A probit model is estimated as follows:

$$Pr(TCM_i = 1) = \Phi(\beta_0 + \beta_1 GDPpc_{i,W} + \beta_2 IMF_{i,P} + \beta_3 Debt_i + \varepsilon_i)$$

where the dependent variable is the binary TCM adoption indicator, $GDPpc_{i,W}$ denotes the World Bank-measured log GDP per capita, $IMF_{i,P}$ is a binary indicator for an active IMF program, and $Debt_i$ is the pre-crisis (2019) debt-to-GDP ratio. Marginal effects (dy/dx) are reported to allow direct probabilistic interpretation. This step tests

whether adoption is driven by fiscal stress or debt vulnerability, or by income level and external conditionality.

5.2 ESTIMATING THE RECOVERY PREMIUM (OLS REGRESSION)

The main regression estimates the association between having a codified return path and primary balance recovery. The specification is:

$$pbd_i = \alpha + \gamma TCM_i + \beta_1 pb2019_i + \beta_2 dtg2019_i + \varepsilon_i$$

where pbd_i is the primary balance recovery measure defined above, TCM_i is the binary treatment variable, $pb2019_i$ is the pre-COVID primary balance, and $dtg2019_i$ is the 2019 debt-to-GDP ratio. The coefficient of interest is γ, which captures the conditional recovery differential associated with having a codified correction mechanism. Pre-crisis fiscal position and debt levels are included as controls to ensure the estimate is not confounded by initial conditions. The model is estimated on a sample of 50 EMDEs, and robustness is assessed by sequentially adding government effectiveness and an active IMF program indicator as additional controls.

5.3 IDENTIFYING THE ADJUSTMENT CHANNEL

To determine whether any observed recovery premium reflects active post-crisis fiscal adjustment or a more structural pre-crisis credibility effect, a falsification exercise is conducted. The following regression is estimated with alternative dependent variables:

$$Channel_i = \alpha + \beta TCM_i + \delta X_i + \varepsilon_i$$

The dependent variable is replaced sequentially with: (i) the change in government revenue between 2019 and 2023, (ii) the change in government expenditure over the same period, and (iii) the change in the debt-to-GDP ratio. If the recovery premium were driven by more aggressive post-crisis austerity among codified regimes, we would expect a statistically significant coefficient on TCM_i in at least one of these regres-

sions. Absence of significance across all three channels supports the alternative interpretation that the premium operates through anticipatory fiscal discipline and pre-crisis buffer-building rather than emergency post-shock adjustment.

6. RESULTS

6.1 DETERMINANTS OF TCM ADOPTION — PROBIT RESULTS

Before turning to the main results, Table 1 reports marginal effects from a probit regression of tcm_binary on country characteristics as of 2019. Log GDP per capita is the only statistically significant predictor of TCM adoption, with a marginal effect of 13.0 percentage points (p=0.023). Debt level and government effectiveness are both insignificant, suggesting that adoption is driven by institutional capacity, proxied by income, rather than fiscal need or general governance quality. This finding has a direct policy implication: lower-income EMDEs are systematically less likely to adopt correction mechanisms, precisely the countries where the design gap is most consequential. It also supports the sample restriction: TCM adoption is not endogenous to pre-COVID fiscal performance, which weakens the most straightforward selection concern in our main regression.

6.2 MAIN RESULTS

Table 2 reports OLS estimates across three specifications. The coefficient on tcm_binary is positive and significant across specifications, though it attenuates when controlling for IMF program history. Countries with any codified return path recovered 2.707 percentage points more primary balance from their COVID trough than comparable countries without one. The coefficient increases to 2.806 when controlling for government effectiveness. Now, this pattern is informative, as a coefficient that strengthens with additional institutional controls suggests TCM codification is not proxying for general governance quality support but rather a distinct dimension of fiscal framework design.

The coefficient on pcmi is negative and insignificant across all specifications. Hence,

Table 1: Determinants of TCM Adoption — Probit Marginal Effects

	Dependent variable: tcm_binary		
	Coefficient	Marginal Effect	Std. Error
$\log(gdppc_{2019})$	0.540^{**}	0.130^{**}	(0.057)
$imf\_program$	0.078	0.019	(0.124)
dtg_{2019}	-0.003	-0.001	(0.002)
ge_{2019}	-0.008	-0.002	(0.005)
Constant	-5.034^{**}	—	(2.551)
Observations		54	
Pseudo R^2		0.107	
Wald χ^2		7.30	
Prob $> \chi^2$		0.121	

Notes: Probit regression with robust standard errors. Dependent variable is tcm_binary, equal to 1 if any codified return path exists. Marginal effects are average marginal effects computed at the sample mean. Standard errors for marginal effects in parentheses. imf_program is coded as 1 if the country had an active IMF program during 2015–2019, and is included as a control variable — the marginal effect should be interpreted with caution given that the variable is coded for a limited number of countries in the sample.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

a mere presence of a correction mechanism without a codified return path carries no measurable fiscal benefit. This distinction between presence and codification is central to our argument and has not been empirically documented in prior literature.

Among the controls, pb2019 enters negatively, consistent with mean reversion in primary balances, and dtg2019 enters positively, though only marginally significant.

6.3 ROBUSTNESS

The baseline sample excludes four countries with idiosyncratic COVID fiscal trajectories driven by factors unrelated to institutional design. Their inclusion introduces substantial noise and hence, renders tcm_binary insignificant which is consistent with our outlier classification. Adding log GDP per capita as an additional control similarly attenuates the coefficient, reflecting the correlation between income and TCM adoption documented in the probit regression. Hence, it is reasonable to conclude that income is a pathway through which institutional capacity operates rather than an independent confounder.

With only ten treated countries, individual observations carry non-trivial weight in

Table 2: Correction Mechanism Codification and Post-COVID Fiscal Recovery

	Dependent variable: pbd		
	(1) Main	(2) +Gov. Eff.	(3) +IMF Prog.
tcm_binary	$\mathbf{2.707}^{**}$	$\mathbf{2.806}^{**}$	$\mathbf{2.240}^{*}$
	(1.176)	(1.162)	(1.278)
pcmi	-1.144	-1.346	-0.755
	(0.812)	(0.812)	(0.912)
pb_{2019}	-0.171^{*}	-0.166^{*}	-0.131
	(0.102)	(0.101)	(0.110)
dtg_{2019}	0.028^{*}	0.025	0.031^{*}
	(0.016)	(0.016)	(0.017)
ge_{2019}	—	0.054	—
		(0.036)	
$imf\_program$	—	—	-0.949
			(1.008)
Observations	50	50	50
R^2	0.186	0.226	0.202

Notes: OLS estimates. Dependent variable is $pbd = pb_{2023} - \min(pb_{2020}, pb_{2021}, pb_{2022})$, measuring recovery from the COVID primary balance trough. Sample restricted to 54 EMDEs with escape clauses, excluding 4 idiosyncratic outliers (Azerbaijan, Maldives, Mongolia, St. Vincent and the Grenadines). Robust standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

the cross-sectional OLS, and the point estimate is correspondingly sensitive to sample composition. We present this sensitivity transparently, our design establishes a conditional association consistent with the theoretical predictions of the Channels section, not a causal identification.

6.4 CHANNEL REGRESSIONS

Table 3 tests whether tcm_binary predicts crisis-period fiscal adjustment through three conventional austerity channels: expenditure, revenue, and debt. All three coefficients are statistically insignificant. Hence, TCM codification does not predict greater expenditure reduction (β=0.284, p=0.829), revenue mobilisation (β=1.445, p=0.260), or faster debt reduction (β=$-$0.230, p=0.952) during 2020–2023.

These null results are consistent with the buffer mechanism as outlined in the Channels Section. So this shows that the correction obligation raises the cost of deviation in normal times, incentivizing governments to maintain an above-target primary

Table 3: Channel Regressions: Crisis-Period Fiscal Adjustment

	Dependent variable		
	(1) ΔExpenditure	(2) ΔRevenue	(3) ΔDebt
tcm_binary	0.284	1.445	−0.230
	(1.304)	(1.266)	(3.771)
pb_{2019}	0.407***	−0.271*	−1.223***
	(0.141)	(0.137)	(0.407)
dtg_{2019}	−0.001	0.039*	−0.087
	(0.023)	(0.022)	(0.066)
ge_{2019}	0.079	0.090*	0.157
	(0.050)	(0.049)	(0.145)
Constant	−1.915	−6.179**	2.938
	(2.637)	(2.560)	(7.622)
Observations	50	50	50
R^2	0.200	0.233	0.203
p-value (tcm_binary)	0.829	0.260	0.952

Notes: OLS estimates. Each column tests whether TCM countries predicts a conventional crisis-period fiscal adjustment channel. ΔExpenditure and ΔRevenue are measured as a percentage of GDP; ΔDebt is the change in the debt-to-GDP ratio. All specifications include the same controls. Robust standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

balance before the shock arrives. Hence, TCM countries entered the COVID-19 pandemic at a mean primary balance of +0.64% against −0.96% for the control group, a 1.6 percentage point pre-crisis differential that accounts for most of the 2.707 percentage point regression effect. The adjustment channel is pre-crisis, and not contemporaneous with the shock.

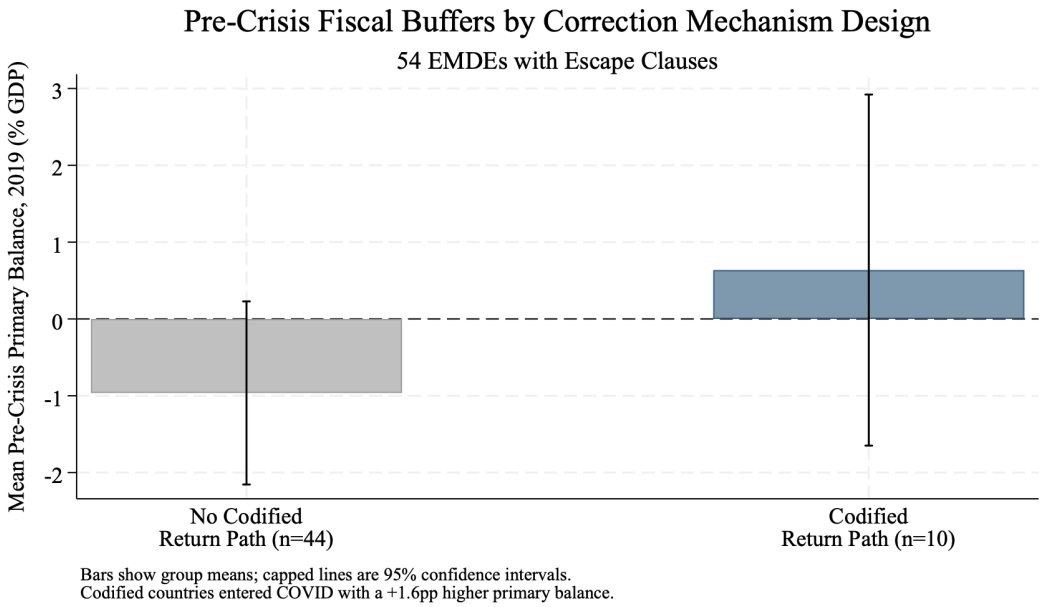

Figure 1: Mean pre-crisis primary balance (2019) by correction mechanism status. Bars are group means; capped lines are 95% confidence intervals. Sample of 54 EMDEs with escape clauses.

7. POLICY RECOMMENDATIONS

The findings of this study point toward three actionable policy recommendations that address the global lag in correction mechanism adoption and the regional disparities that worsen it.

The first recommendation addresses the regional gap in adoption and recovery outcomes. Sub-Saharan Africa recorded zero TCM adoption across the sample and the weakest mean fiscal recovery at 2.68 percentage points. Latin America and the Caribbean, on the other hand, have 6 countries with TCM adoption and a recovery of 4.54 percentage points. This disparity reflects political economy constraints that make unilateral reform difficult for individual governments. The solution lies in coordinated regional action by bodies such as the West African Economic and Monetary Union (WAEMU) that can provide the political cover necessary for member states to adopt simultaneous reform. This reduces the risk of competitive disadvantage and signals collective fiscal credibility to markets.

The second recommendation is that fiscal frameworks must move beyond sim-

ply setting debt limits and instead incentivize building fiscal buffers during peacetime. Governments should establish medium-term debt anchors, in other words a self-imposed debt target, set meaningfully below their debt distress limits, the point at which a country's debt becomes so large that markets begin to question the country's repayment ability. The size of this safety margin should be calibrated to country-specific volatility, accounting for High-Frequency Indicators such as growth, interest rates, and exchange rates. Countries that are heavily reliant on commodity exports or highly exposed to natural disasters face larger and more persistent shocks, and should therefore build correspondingly larger buffers during periods of favorable terms of trade.

It is a necessity to move from representative correction mechanisms to ones with enforceable, cumulative obligations in order to build the kind of fiscal credibility that allows EMDEs to absorb shocks, protect investor sentiment, and sustain long-term growth trajectories. 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.

8. DISCUSSION AND CONCLUSION

This paper has examined whether the legal codification of a return path, as distinct from the mere presence of a correction mechanism, affects the speed with which EMDEs restore fiscal space following a common shock. The evidence supports a qualified affirmative. Countries with a codified correction mechanism recovered approximately 2.7 percentage points more of their primary balance from the COVID trough than comparable countries without one, whereas the presence of a mechanism lacking a specified return path is associated with no measurable recovery premium. This distinction between presence and codification constitutes the paper's principal empirical contribution.

The interpretation warrants caution. The estimate represents a conditional association rather than a causal effect, and its magnitude is sensitive to the treatment of

a small number of high-variance observations. With only ten treated countries, the cross-section cannot support a causal interpretation, and none is claimed. Greater confidence derives from the convergence of several independent results. Codified countries entered the pandemic with primary balances approximately 1.6 percentage points higher on average; TCM status predicts none of the three conventional adjustment channels of expenditure, revenue, or debt; and adoption is associated with income rather than fiscal need. Taken together, these findings are consistent with a single mechanism, whereby the correction obligation raises the cost of deficits in normal periods, leading codified countries to accumulate fiscal buffers in advance of the shock rather than to consolidate in its aftermath. The recovery premium thus reflects pre-crisis positioning rather than more aggressive post-crisis adjustment.

Several limitations qualify these conclusions. The treated group is small, the design is cross-sectional, and the ordinal coding of correction-mechanism type cannot capture the manner in which return paths are specified or enforced. The exclusion of four shock-dominated economies, while economically justified, remains a discretionary choice. These constraints do not invalidate the result, but they bound the strength of the inference that can be drawn from it.

Future research would benefit from panel variation. As additional EMDEs adopt correction mechanisms and subsequent shocks test them, the question may be revisited using within-country variation and a more robust identification strategy than a single post-COVID cross-section permits. The most durable implication of the present analysis, however, concerns not the magnitude of the recovery premium but its origin: the fiscal space available during a crisis appears to depend on the discipline established beforehand, of which codification is one institutional expression.

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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
Armenia	0	0
Azerbaijan	0	0
Bahamas, The	1	1
Benin	1	0
Bulgaria	1	1
Burkina Faso	1	0
Cambodia	0	0
Chile	1	1
Colombia	0	0
Costa Rica	0	0
Côte d'Ivoire	1	0
Dominica	0	0
Dominican Republic	0	0
Ecuador	0	0
El Salvador	0	0
Georgia	0	0
Grenada	1	2
Guinea Bissau	1	0
Honduras	1	1
Hungary	0	0
India	2	0
Jamaica	1	2
Kenya	0	0
Kosovo	0	0
Malaysia	0	0
Maldives	0	0

Country	PCM	TCM
Mali	1	0
Marshall Islands	0	0
Mauritius	0	0
Mexico	0	0
Mongolia	0	0
Niger	1	0
Pakistan	1	1
Panama	0	0
Paraguay	0	0
Peru	1	1
Poland	2	1
Romania	1	1
Russia	0	0
Senegal	1	0
Serbia	0	0
Solomon Islands	0	0
Sri Lanka	0	0
St. Vincent and the Grenadines	0	0
Suriname	0	0
Tanzania	0	0
Thailand	0	0
Togo	1	0
Uganda	0	0
Uruguay	0	0
Vanuatu	0	0
Vietnam	0	0
Zambia	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 B, but excluded from the final regression. See Appendix B for the justification of the same.

APPENDIX B - OUTLIER JUSTIFICATION

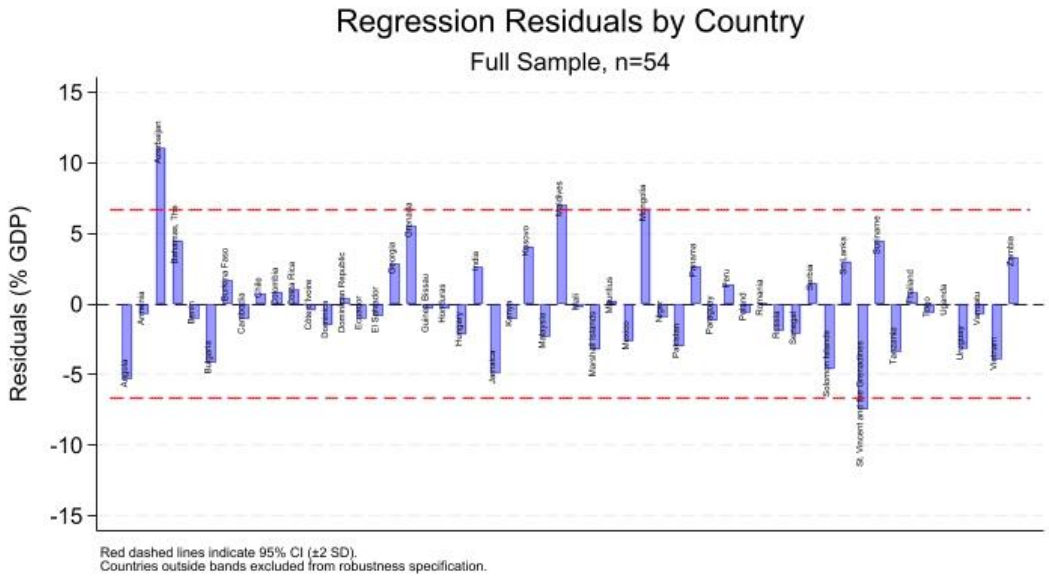

Figure B1: Regression Residuals by Country (Full Sample, n=54)

Red dashed lines indicate 95% CI (±2 SD).
Countries outside bands excluded from robustness specification.

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 C - DISTRIBUTION OF FISCAL RECOVERY

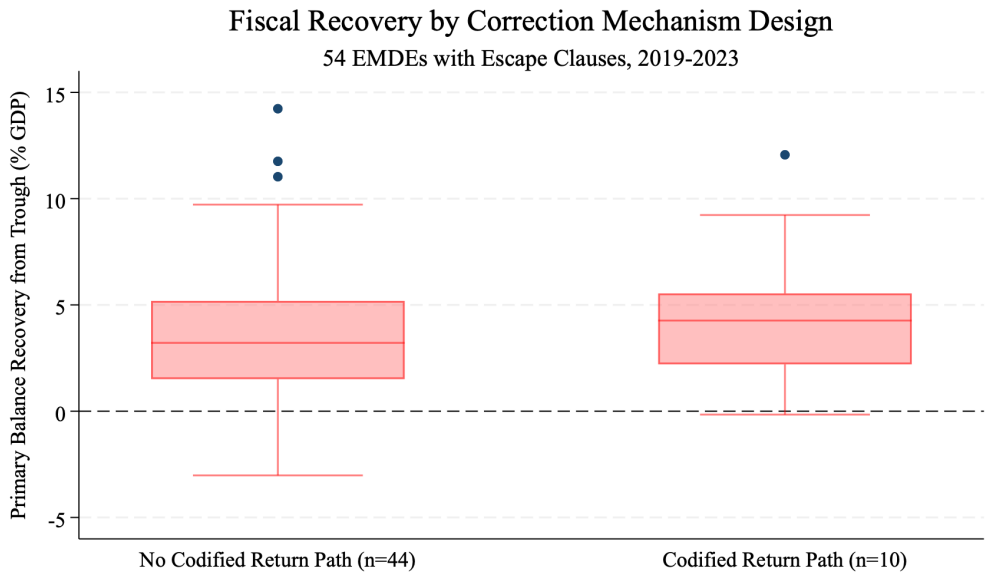

Figure C1: Distribution of primary balance recovery from the COVID trough (2019–2023) by correction mechanism status. Boxes show the interquartile range and median; whiskers extend to 1.5×IQR. Sample of 54 EMDEs with escape clauses.

Figure C1 plots the raw recovery distribution for the two groups. They overlap almost entirely. The medians sit about a percentage point apart, the interquartile ranges land on top of each other, and neither a Kolmogorov–Smirnov test ($p = 0.73$) nor a Mann–Whitney test ($p = 0.40$) can reject the hypothesis that the two are drawn from the same distribution.

The recovery premium in Table 2 is a conditional result. It shows up once pre-crisis primary balance and debt are held fixed, and it does not survive as a gap between unconditional distributions, because the codified group is small and its recovery outcomes are spread widely. A reader who expects the effect to be visible in the raw data will not find it here, and should not. We include the figure so that the raw picture is on the table alongside the regression, rather than left to inference.

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