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Fiscal rules, escape clauses, and credit markets: Evidence from financial crises

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ABSTRACT

This paper investigates whether escape clauses in fiscal rules mitigate the negative effects of financial crises on domestic credit markets. Using a dynamic panel of 56 countries from 1985 to 2015, we estimate the impact of escape clauses on both domestic bank credit and sovereign bond spreads during crises. Our results show that escape clauses significantly soften the contraction in credit and reduce sovereign borrowing costs when crises occur. In contrast, discretionary fiscal deviations—those not supported by legal clauses—fail to produce similar benefits. These findings suggest that institutionalized fiscal flexibility plays a stabilizing role in periods of financial distress by supporting market confidence and access to finance. To our knowledge, this is among the first empirical studies to assess the role of escape clauses during idiosyncratic banking crises.

1. Introduction

Fiscal rules aim to ensure debt sustainability and policy credibility, but their rigidity may constrain crisis response (Eyraud et al., 2018; Halac and Yared, 2018). To balance commitment with flexibility, many countries have incorporated escape clauses—mechanisms that allow temporary deviations under specified conditions (Davoodi et al., 2022).

This paper investigates whether escape clauses help stabilize domestic credit markets during banking crises. Using a panel of 56 countries from 1985 to 2015, we estimate their impact on bank credit and sovereign bond spreads. Our findings show that escape clauses cushion the negative effects of crises, supporting credit flows and lowering borrowing costs. To our knowledge, this is the first cross-country study to analyze the credit market effects of escape clauses during idiosyncratic banking crises using both credit quantity and cost metrics.

2. Transmission channels

The mechanism underlying our hypothesis builds on the theoretical framework developed by Amador and Angeletos (2006) and Halac and Yared (2018), which formalizes the trade-off between fiscal commitment and the value of policy flexibility in the presence of shocks. Well-designed and credible fiscal rules promote fiscal discipline and enhance access to credit markets by reducing sovereign risk and lowering interest rates, thereby potentially improving private financing conditions. However, such rules may also exacerbate business cycle volatility if governments are required to adhere to them rigidly and are thus unable to implement countercyclical measures during economic downturns.

To address this, escape clauses act as institutionalized forms of flexibility, allowing for temporary deviations from fiscal rules without undermining long-term policy credibility. In doing so, they help mitigate the amplification of economic downturns and facilitate smoother access to credit markets during crises (Eyraud et al., 2018; IMF, 2021; Davoodi et al., 2022).

The effect can occur through two channels: a spending effect and a credibility effect. The first effect can be generated by fiscal stimulus to the economy. When escape clauses are in place, they usually strengthen the fiscal framework, giving countries the ability to increase fiscal spending during crises. These clauses allow countries to temporarily suspend or deviate from fiscal rule targets under exceptional circumstances, offering greater flexibility, which can lead to rapid increases in public spending (Schaechter et al., 2012). During the 2008 global financial crisis, many countries suspended their fiscal rules (if they had

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them) to implement countercyclical stimulus measures to reduce the crisis's economic impact, while also setting a path to restore the rules (Schaechter et al., 2012). In the European Union, the activation of the general escape clause, along with national clauses in various countries, provided quick access to significant fiscal packages. In fact, activating escape clauses is expected to lead to higher temporary incomes for families, encouraging more credit demand, which stimulates financial development.

Additionally, the presence of an escape clause strengthens the credibility of fiscal rules during periods of high spending, which is important to ensure that an increase in credit during times of higher default risk does not significantly raise risk premiums and thus the cost of credit (Eyraud et al., 2018; Iara and Wolff, 2014). This credibility effect is also supported by recent empirical findings showing that when escape clauses are invoked transparently and with predefined criteria, they are associated with more stable sovereign spreads and lower borrowing costs, as markets internalize the expectation of a timely return to the rule-based fiscal path (Davoodi et al., 2022; IMF, 2021). In this sense, escape clauses may help preserve the anchoring role of fiscal rules even when deviating from short-term targets, which is crucial for financial stability and investor confidence during crises.

3. Data and descriptive statistics

We use annual data from 1985 to 2015. Our sample includes 56 countries: 38 high-income countries, 12 upper-middle-income countries, and 6 low-income countries. The data was collected from the World Bank's "World Development Indicators" and the IMF's "World Economic Outlook." We extract variables such as gross debt as a percentage of GDP, reserves as a percentage of GDP (excluding gold), inflation, GDP per capita adjusted by PPP, terms of trade, financial crises, fiscal rules, and escape clauses. These variables are independent and directly related to each country's public finances, with some reflecting the direct effect of escape clauses and others serving as control variables to account for the macroeconomic environment.

We use domestic credit to the private sector by banks (as a percentage of GDP) as a proxy for financial development, which serves as the dependent variable in our study (see, for instance, Fernández and Parro, 2019). We also employ the sovereign bond spread as an alternative proxy for financial development (Barreto et al., 2024). While there are various ways to measure financial development, we selected these indicators because financial markets are complex and multidimensional, and relying on a single index may not adequately capture this complexity in international comparisons. To avoid potential limitations associated with composite indices, we follow a widely accepted practice in the literature.

Table 1 provides descriptive statistics for three groups: (1) countries without fiscal rules, (2) countries with fiscal rules and no escape clauses, and (3) countries with fiscal rules and escape clauses. Comparing group (1) and group (2), average domestic credit increases from 39.25 to 66.93, and GDP per capita rises from USD 14,635 to USD 25,594. Inflation also drops from 8.70 % to 4.17 %. The average incidence of financial crises decreases slightly from 9.8 % to 5.5 %. When comparing group (2) and group (3), domestic credit further increases to 83.77, and GDP per capita rises to USD 32,937. However, the share of countries experiencing financial crises grows from 5.5 % to 18 %. Inflation also declines further, reaching 2.52 %. Sovereign bond spreads increase from 5.55 in group (2) to 9.59 in group (3), while gross debt and reserves fluctuate across the groups without a clear pattern.

4. Methodological approach

According to existing literature, specifically Brüeckner and Carneiro (2015) and Frankel et al. (2013), we use the following specification to estimate the effect of escape clauses during financial crises on financial development.

Table 1
Descriptive Statistics.

Without a fiscal rule				
Variable	**Average**	**Median**	**Variance**	**Observations**
Domestic credit	39.25	30.49	1021.44	182
Sovereign bond spread	without information			
Financial crisis	0.098	0	0 0.089	182
Gross debt	52.65	44.34	728.17	182
GDP	14,635.47	10,663.02	156,150,016	182
inflation	8.70	7.51	49.48	182
Central bank reserves	14.05	13.21	76.55	182
Terms of trade	105.64	100	421.21	182
With a fiscal rule and no escape clauses				
Variable	**Average**	**Median**	**Variance**	**Observations**
Domestic credit	66.93	73.66	2316.69	327
Sovereign bond spread	5.55	4.22	30.19	296
Financial crisis	0 0.055	0	0.052	327
Gross debt	51.09	41.54	1763.48	327
GDP	25,594.36	22,713.25	305,795,169	327
inflation	4.17	3.14	13.17	327
Central bank reserves	16.59	11.40	371.54	327
Terms of trade	112.45	101.14	868.69	327
With a fiscal rule and escape clauses				
Variable	**Average**	**Median**	**Variance**	**Observations**
Domestic credit	83.77	87.74	2220.32	388
Sovereign bond spread	9.59	6.58	101.27	366
Financial crisis	0.180	0	0.148	388
Gross debt	61.26	57.10	1083.91	388
GDP	32,937.65	31,176.98	287,946,961	388
inflation	2.52	2.23	5.33	388
Central bank reserves	15.12	6.24	459.45	388
Terms of trade	102.80	97.40	403.09	388

$$y_{i,t} = \alpha + \beta_1 y_{i,t-1} + \beta_2 Escape_Clause + \beta_3 Crisis_{i,t} + \beta_4 Escape_Clause_{i,t} * Crisis_{i,t} + \beta_5 X_{i,t} + \theta_i + \varepsilon_{i,t}$$

Where $y_{i,x}$ represents the dependent variable, which is the financial development of country i in period t measured as domestic credit to the private sector provided by banks or the sovereign bond spread. The independent variables include $Escape\ Clause_{i,t}$, which equals one if there is an escape clause, and $Crisis_{i,t}$, which equals one during a financial crisis. These two variables, $Escape_Clause * Crisis_{i,t}$, are multiplied to measure the effect of escape clauses on financial development during crises. Furthermore, $X_{i,t}$ represents control variables like inflation, log GDP, central bank reserves, gross debt, and terms of trade. Finally, θ_i represents the country's fixed effect.

The model is a dynamic panel, estimated using the Arellano-Bond (1991) two-step GMM[1] estimation with country fixed effects. We report coefficient estimates and robust standard errors (clustered by country). This estimation method was chosen because there may be endogeneity due to reverse causality between financial development and escape clauses. Escape clauses in fiscal rules could improve a country's credit rating, leading to lower interest rates, more credit for households, and thus higher financial development. At the same time, higher financial development could boost GDP, drive economic growth, and increase the awareness of the importance of escape clauses.

To avoid reverse causality, the model uses lagged values of the dependent variable as internal instruments (GMM-style) and assumes that all other explanatory variables are exogenous, including them as instrumental variables (IV-style). Autocorrelation tests for first and

[1] Generalized Method of Moments.

second order are reported. Additionally, the Hansen J-statistic is used for overidentification restrictions (the joint validity of all instruments), along with the Hansen C-statistic (the difference-in-Hansen test) for the validity of IV instruments (a subset of all instruments).

5. Results

Tables 2 and 3 analyze the impact of escape clauses on financial development—measured as domestic credit to the private sector provided by banks—and on sovereign bond spreads during banking crises respectively. All estimations pass the diagnostic tests outlined in the methodology section, including the Hansen J and Hansen C tests for overidentification and instrument exogeneity. These results confirm that the model is correctly specified and that the instruments used are valid.

Domestic credit to the private sector held by banks

The results in Table 2 reveal several important dynamics. First, escape clauses, when considered in isolation, do not exhibit any statistically significant effect on financial development. This suggests that their mere existence, outside the context of crises, does not directly influence the trajectory of financial market development.

Second, banking crises exert a strong and statistically significant negative impact on financial development, consistent with the broader literature on the disruptive effects of systemic financial shocks (Reinhart and Rogoff, 2010). These crises tend to erode confidence in the financial system, reduce credit availability, and weaken the institutions that support financial intermediation.

Gross public debt also shows a negative and statistically significant relationship with financial development in the specifications where it is included (Columns 2 and 4). This support concerns that high levels of sovereign debt may crowd out private sector borrowing or serve as a signal of fiscal vulnerability. The signs and statistical significance of the control variables generally align with theoretical expectations and are consistent with findings in other empirical studies (Brüeckner and Carneiro, 2015).

The most policy-relevant findings emerge in Columns 3 and 4, where the interaction term between escape clauses and banking crises is both positive and statistically significant. Specifically, the inclusion of escape clauses mitigates the negative effect of a crisis on financial development by approximately 8.2 to 9.7 percentage points. This indicates that escape clauses can play a meaningful countercyclical role, allowing governments to implement more flexible and responsive fiscal policies that help sustain financial development in times of distress.

Importantly, the inclusion of the interaction term does not materially alter the coefficients of the main explanatory variables, particularly those for banking crises and public debt, which remain significant and stable across specifications. This reinforces the robustness and credibility of the findings.

In sum, these results suggest that institutionalized fiscal flexibility—through well-designed escape clauses—can provide governments with the necessary room to respond to financial turmoil without undermining long-term financial development. This interpretation aligns with Melecky and Raddatz (2014), who show that countries with more adaptable fiscal frameworks and developed debt markets are better equipped to weather adverse economic shocks.

As a robustness check, we present a separate specification (Table 2A) introducing a new indicator for discretionary deviations from fiscal rules. This addition helps isolate the effects of rule-based flexibility from ad hoc departures and reinforces our institutional argument. This indicator for discretionary deviations from fiscal rules is defined as years in which a country deviated from its fiscal target without invoking a legal escape clause. This allows us to contrast institutionalized flexibility with ad hoc fiscal loosening.

Specifically, the discretionary deviation variable identifies country-years where fiscal rule compliance broke down without formal institutional authorization. The baseline version defines a discretionary deviation as occurring when (i) a fiscal rule was operative, (ii) the cyclically adjusted balance fell below –3 percent of GDP, and (iii) no fiscal council was active to potentially validate the deviation. This logic distinguishes

Table 2
Impact of escape clauses on financial development measured as Domestic credit to the private sector held by banks.

Variables	*Financial development*$_t$ (1)	*Financial development*$_t$ (2)	*Financial development*$_t$ (3)	*Financial development*$_t$ (4)
Financial development$_{t-1}$	0.955***	1.023***	0.933***	1.014***
	(0.047)	(0.0501)	(0.049)	(0.0511)
Escape clauses	0.007	0.282	−0.797	−0.361
	(0.684)	(0.641)	(0.750)	(0.888)
Banking crises	−3.646	−4.442***	−7.310***	−10.74***
	(1.441)	(1.562)	(1.843)	(3.659)
Escape clauses* Banking crises			8.290**	9.704**
			(2.727)	(4.675)
GDP	1.952	0.328	2.238	0.406
	(1.582)	(1.389)	(1.479)	(1.450)
Terms of trade	−0.002	−0.0122	−0.001	−0.0123
	(0.010)	(0.0140)	(0.011)	(0.0164)
Central bank reserves	−0.005	−0.0261	0.011	−0.0155
	(0.028)	(0.0165)	(0.028)	(0.0185)
Inflation	−0.002	0.142	−0.001	0.153
	(0.002)	(0.149)	(0.001)	(0.139)
Gross debt		−0.0397**		−0.0354***
		(0.0153)		(0.0132)
Constant	−14.475	0.155	−16.012	−0.187
	(12.076)	(9.083)	(11.295)	(9.746)
Observations	1042	876	1042	876
Number of countries	57	56	57	56
Instruments	36	34	37	35
AR (1)	0.019	0.017	0.015	0.010
AR (2)	0.135	0.189	0.141	0.214
Hansen J test	0.248	0.178	0.264	0.155
Hansen C test	0.470	0.102	0.367	0.145

Note: Two-step Arellano-Bond GMM estimation. The cluster-robust standard errors are shown in parentheses beneath each point estimate. *** denotes significance at the 0.01 level, ** at the 0.05 level, and * at the 0.10 level. The lag of financial development is assumed to be endogenous, while all other explanatory variables are assumed to be exogenous. The Hansen J test is a test for overidentification, and the Hansen C test is a test for the exogeneity of the IV-style instruments. It is important to note that the results pass all the endogeneity tests conducted, so we can assume the model is well-specified.

Table 3
Impact of escape clauses on financial development measured as sovereign bonds spread during banking crises.

Variables	*Financial development*$_t$ (1)	*Financial development*$_t$ (2)	*Financial development*$_t$ (3)	*Financial development*$_t$ (4)
Spread$_{t-1}$	0.777***	0.894***	0.773	0.898***
	(0.130)	(0.030)	(0.135)	(0.040)
Escape clauses	1.196*	0.782	1.115*	0.387
	(0.640)	(0.785)	(0.654)	(0.285)
Banking crises	1.016*	−0.085	1.514**	−0.121
	(0.588)	(0.543)	(0.701)	(0.505)
Escape clauses* Banking crises			−2.761**	−0.161
			(1.127)	(0.567)
GDP	−0.614	−0.387	−0.610*	−0.339*
	(0.443)	(0.319)	(0.352)	(0.154)
Terms of trade	−0.003	−0.008	−0.005*	0.001
	(0.003)	(0.019)	(0.003)	(0.001)
Central bank reserves	−0.005	0.002	−0.005	0.004
	(0.014)	(0.011)	(0.018)	(0.004)
Inflation	−0.001	−0.008	−0.004	−0.006
	(0.044)	(0.033)	(0.039)	(0.027)
Gross debt		−0.018		−0.001
		(0.029)		(0.002)
Constant	7.327	5.747**	7.547*	3.512
	(4.902)	(2.267)	(4.042)	(1.605)
Observations	540	459	540	459
Number of countries	31	30	31	30
Instruments	36	33	37	35
AR (1)	0.067	0.009	0.066	0.010
AR (2)	0.059	0.029	0.062	0.027
Hansen J test	0.540	0.695	0.707	0.595
Hansen C test	0.942	0.526	0.490	0.948

Note: Two-step Arellano-Bond GMM estimation. The cluster-robust standard errors are shown in parentheses beneath each point estimate. *** denotes significance at the 0.01 level, ** at the 0.05 level, and * at the 0.10 level. The lag of financial development is assumed to be endogenous, while all other explanatory variables are assumed to be exogenous. The Hansen J test is a test for overidentification, and the Hansen C test is a test for the exogeneity of the IV-style instruments. It is important to note that the results pass all the endogeneity tests conducted, so we can assume the model is well-specified.

Table 2A
Discretionary deviations.

Variables	*Financial development*$_t$ (1)
Financial development$_{t-1}$	0.981***
	(0.047)
Threshold	1.497
	(1.656)
Escape clauses	−1.801
	(1.380)
Banking crises	−39.452*
	(19.496)
Escape clauses* Banking crises	40.873**
	(19.496)
GDP	5.465
	(5.782)
Terms of trade	0.037
	(0.044)
Central bank reserves	0.115
	(0.107)
Inflation	0.251
	(0.445)
Gross debt	0.007
	(0.044)
Constant	−59.678
	(63.375)
Observations	491
Number of countries	39
Instruments	56
AR(1)	0.101
AR(2)	0.233
Hansen J test	0.434
Hansen C test	0.982

Note: Two-step Arellano-Bond GMM estimation. The cluster-robust standard errors are shown in parentheses beneath each point estimate. *** denotes significance at the 0.01 level, ** at the 0.05 level, and * at the 0.10 level. The lag of financial development is assumed to be endogenous, while all other explanatory variables are assumed to be exogenous. The Hansen J test is a test for overidentification, and the Hansen C test is a test for the exogeneity of the IV-style instruments. It is important to note that the results pass all the endogeneity tests conducted, so we can assume the model is well-specified.

between institutionalized flexibility (via escape clauses) and ad hoc rule-breaking. Alternative versions adopt stricter fiscal standards (–1 % and 0 % thresholds), offering a gradient of fiscal stringency. In all cases, the final variable excludes country-years lacking operative fiscal rules and adjusts for the presence of fiscal councils as a legitimacy proxy, consistent with prior literature. These measures allow robust empirical exploration of whether credit markets differentiate between rule-based and discretionary departures from fiscal targets.

In Table 2A, the coefficient for banking crises is negative. In contrast, the interaction term between banking crises and escape clauses remains positive and significant, confirming that institutionalized flexibility provides credibility benefits. Diagnostic tests (Hansen J, AR(1), AR(2)) indicate that the model is well specified. The results show that escape clauses continue to have a stabilizing effect, whereas discretionary deviations are associated with a contraction in credit, highlighting the importance of legal fiscal flexibility in maintaining market access. Overall, these findings suggest that markets do not reward discretionary deviations, reinforcing the idea that credibility derives from legal and transparent flexibility rather than from discretion. These results align with event-level SCM findings that EC activations reduce sovereign-risk metrics, with effects persisting 2–12 months (Ulloa-Suárez et al., 2025).

Sovereign Bond Spread

Table 3 provides complementary evidence on the role of escape clauses, this time focusing on their impact on sovereign borrowing costs. In Columns 1 and 3, escape clauses on their own show a marginally significant and positive association with sovereign spreads, suggesting that in normal times, financial markets may interpret the presence of such clauses as a potential weakening of fiscal discipline. However, this effect is neither consistent nor robust across specifications, indicating that market concerns may be context-dependent rather than structural. This finding is consistent with evidence from advanced economies showing that financial markets do respond to institutional fiscal frameworks, including no-bailout clauses and rule-based systems (Feld et al., 2017).

As expected, banking crises are generally associated with an increase in sovereign spreads, reflecting heightened risk perceptions among investors during episodes of financial instability. In particular, the coefficient in Column 3 indicates that a crisis raises the spread by approximately 1.5 percentage points, a statistically significant and economically meaningful increase. This finding reinforces the idea that financial markets demand a risk premium when fiscal and financial systems come under stress.

The most relevant result arises from the interaction between escape clauses and banking crises in Column 3. The interaction term is negative and statistically significant (−2.76), implying that the presence of escape clauses substantially dampens the increase in spreads typically triggered by banking crises. In other words, when countries face systemic shocks, escape clauses appear to enhance investor confidence, likely because they provide a credible and rule-based mechanism for fiscal flexibility that prevents uncontrolled deviations from fiscal discipline.

This finding underscores a key implication: although escape clauses may generate market skepticism in stable periods, they become valuable tools during crises, offering policy space and institutional credibility.

This contrasts with the conclusions of Barreto et al. (2024), who find that markets did not penalize fiscal rule deviations during the COVID-19 pandemic, regardless of whether escape clauses were in place. However, the divergence in findings can be attributed to the nature of the shocks under study. COVID-19 was a globally recognized, exogenous, and politically uncontroversial shock, which prompted widespread tolerance for fiscal deviations. In contrast, banking crises are often perceived as endogenous and more closely tied to a country's institutional capacity and policy credibility, inviting greater scrutiny from investors.

In such contexts, well-designed escape clauses can act as fiscal stabilizers—preserving or even enhancing credibility by enabling governments to respond flexibly without abandoning the overarching fiscal framework. These findings align with the growing body of literature emphasizing the importance of credible rule-based flexibility (Davoodi et al., 2022) as a means to maintain access to financing during episodes of fiscal stress.

Together with the results from Table 2, this evidence suggests that escape clauses, when properly institutionalized, not only support financial development but also help contain the cost of public borrowing in times of crisis. Far from being a sign of fiscal weakness, escape clauses may serve as a hallmark of resilient and credible fiscal institutions.

6. Conclusions

We find that escape clauses significantly moderate the negative effects of banking crises on financial development. They support credit flows and reduce sovereign spreads, unlike discretionary fiscal deviations, which lack market credibility. These results highlight the value of rule-based fiscal flexibility for financial stability during crises. Together with SCM evidence on specific activations (Ulloa-Suárez et al., 2025), our panel results suggest that well-designed escape clauses are credibility-enhancing, not credibility-destroying, in downturns. Taken together, our findings emphasize that credible, rule-based flexibility is preferable to discretionary fiscal expansions, both in terms of sustaining credit flows and containing sovereign risk during crises.

Data availability

Data will be made available on request.

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