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Credit where Credit is Due: Fiscal Consolidations, Sovereign Risk and Bank Credit

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ABSTRACT: Using quarterly data on bank credit to the private sector and a comprehensive database on fiscal policy announcements for a sample of 32 advanced economies and emerging markets, we estimate the dynamic response of bank credit to fiscal consolidations. Our results show that the relationship between fiscal consolidation announcements and real bank credit differs by country groups. In countries with high sovereign risk, consolidation announcements "crowd-in" bank credit, particularly credit to the corporate sector, whereas countries with low initial risk experience credit contractions. Further, we present evidence that the composition of fiscal consolidations matters: expenditure-based consolidations are associated with a more favorable bank credit response than revenue-based ones. Finally, we show that bank credit responds more favorably to fiscal consolidations in countries with flexible exchange rate regimes, lower levels of household indebtedness, and when consolidation are announced during periods of robust economic activity.

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Credit where Credit is Due: Fiscal Consolidations, Sovereign Risk, and Bank Credit

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1 Introduction

Estimating the effects of fiscal policy on key macroeconomic variables has been the subject of intense scrutiny in the renaissance of fiscal policy research in the aftermath of the global financial crisis (Ramey, 2019), and is once again at the center stage of policy discussions as several countries implement measures to bring down high levels of public debt and rebuild policy buffers. While the debate around the size of fiscal multipliers on output has attracted the most attention, relatively few studies have examined the effects of fiscal stimulus or tightening on bank credit—even though, in several economic models, bank credit is a key transmission channel for fiscal policy.

Traditional models suggest that fiscal consolidations can generate crowding-in effects, as resources are freed for the private sector. Austerity measures would lead to lower interest rates and increases in the supply of bank credit to the private sector, as well as private consumption and private investment (Murphy and Walsh, 2022). Moreover, fiscal consolidations may help anchor inflation expectations (David et al., 2025), which can further contribute to lower interest rates and support the expansion of the demand for bank credit.

However, recent empirical evidence for advanced economies (AEs) suggests that fiscal stimulus is associated to reductions in interest rates—or, at very least, muted responses—(Auerbach et al., 2020; Miranda-Pinto et al., 2023), while fiscal consolidations are often followed by increases in the cost of credit (Agca and Igan, 2019). These findings indicate that, at least in some contexts, the reduction in economic activity linked to fiscal consolidations and ensuing reduction in credit demand could more than offset any positive effects on credit supply. Therefore, the direction of fiscal policy's effects on bank credit remains an open question.

This paper examines the dynamic effects of fiscal consolidation announcements on bank credit to the private sector using local projection methods applied to an unbalanced panel of 32 AEs and Emerging Markets (EMs), based on quarterly data spanning 1978-2023. The use of quarterly data allows us to better control for anticipation effects related to fiscal policy implementation. The identification strategy rests on the assumption that fiscal consolidation measures are unlikely to be adjusted in response to changes in bank credit within the same quarter. This assumption is plausible, as the design, announcement, and implementation of consolidation packages typically span several months, even when enacted outside the regular budget cycle (see the discussion in David et al., 2025). Such packages are generally motivated by concerns about high public debt or fiscal sustainability, rather than by short-term developments in private credit markets. To mitigate omitted variable bias, the local projection regressions include a rich set of control variables as well as fixed-effects.

Our results show that the relationship between fiscal consolidation announcements and real bank credit differs by country groups. In EMs there is evidence of crowding-in effects, as such announcements are associated with an increase in real bank credit (particularly in the case of expenditure-based consolidations). A further breakdown of bank credit into household and corporate components shows that this positive association in EMs is more pronounced for corporate credit. Nonetheless, for the full sample of countries (including both Advanced Economies and

Emerging Markets), fiscal consolidation announcements are associated with a sustained decline in real bank credit. Specifically, the announcement of a new fiscal consolidation package leads to a cumulative decline of around 2 percent in bank credit over a 12-quarter horizon.

The paper also highlights the critical role of sovereign risk in mediating the relationship between fiscal consolidation announcements and bank credit. The results indicate that countries with low sovereign risk—measured either by investment-grade status or a low EMBI spread— tend to experience a contraction in real bank credit following such announcements. In contrast, countries with elevated sovereign risk see an expansion in real bank credit, particularly to the corporate sector. These findings illustrate that, in high-risk countries, efforts to reduce fiscal imbalances can lower borrowing costs, thereby stimulating private credit growth. Thus, the crowding-in effects of fiscal consolidations are likely to be more pronounced in countries with higher sovereign risk.

To better illustrate the central role of the sovereign risk channel in shaping the relationship between fiscal policy and credit markets, we conduct a counterfactual exercise that compares the observed response of bank credit to fiscal consolidation announcements with a hypothetical scenario in which sovereign spreads are assumed not to react to such announcements. Specifically, we estimate a panel VAR (PVAR) model capturing the dynamic relationship between fiscal consolidations, EMBI spreads, and private credit and construct a counterfactual response by "shutting off" the link between EMBI spreads and fiscal consolidations. Consistent with our local projections results, we find that the decline in real bank credit is significantly larger when sovereign spreads do not respond to fiscal consolidation announcements, highlighting the critical role that the reduction in sovereign risk plays in facilitating the crowding-in of private credit following fiscal consolidations.

Moreover, we show that additional factors—such as the phase of the business cycle and the level of household indebtedness—shape the relationship between fiscal consolidation announcements and bank credit. Consistent with the literature on fiscal multipliers, our findings suggest that crowding-in effects are more likely when consolidation efforts occur during periods of economic expansion. In contrast, high levels of household indebtedness tend to reinforce a negative relationship between fiscal consolidations and bank credit to the private sector.

We also examine how the exchange rate regime influences the relationship between fiscal consolidation announcements and bank credit. Consistent with the textbook Mundell-Fleming model[1], our findings suggest that flexible exchange rate regimes facilitate crowding-in in effects following fiscal consolidations, as expenditure switching and stronger external demand help offset the potential contractionary impact of fiscal tightening. In contrast, in countries with fixed exchange rate regimes, fiscal consolidations are associated with a decline in bank credit to the private sector.

[1]There is also an international dimension to the relationship between fiscal policy and bank credit. If channels that link fiscal stimulus to lower interest rates dominate, then the currency should not necessarily appreciate following a fiscal expansion, as shown in Ravn et al. (2012). Conversely, in a context of lower sovereign risk and strong capital inflows, fiscal consolidations should not necessarily lead to currency depreciation, which would run counter to the predictions of the traditional Mundell-Fleming model. However, when identification strategies account for the influence of the business cycle on fiscal consolidation decisions—such as in the case of episodes identified through a narrative approach—fiscal consolidations are indeed found to be associated with currency depreciation in both AMs and EMs Carrière-Swallow et al. (2021).

Our paper contributes to a growing empirical literature studying the relationship between fiscal policy and activity, as well as the channels through which this relationship operates. We focus on the volume of bank credit since the effects of fiscal policy on the cost of credit (interest rates) has been extensively covered by other papers. For example,(Murphy and Walsh, 2022) argue that the empirical evidence for the United States indicating that fiscal stimulus is not linked to increases in interest rates can be explained by the fact that in contexts of economic slack, the upward pressure of increased government borrowing on interest rates may be offset by an expansion in credit supply due to rising private sector income. Moreover, (Miranda-Pinto et al., 2023) show that following a fiscal stimulus, highly-indebted households operating under "savings constraints" may use additional income to deleverage, rather than consume, thus dampening upward pressure on interest rates. In this setting, fiscal stimulus may lead to lower borrowing costs and increased bank credit for some segments of the economy, as income is redistributed toward agents with lower marginal propensities to consume. They present evidence from a panel of OECD countries indicating that the interest rate response to fiscal stimulus is heterogeneous across countries and declines with income inequality.

Regarding the volume of credit, some papers have argued that the increased supply of government securities due to the fiscal stimulus improves bank balance sheet liquidity and enhances their lending capacity (Affinito et al., 2022 and Pradhan et al., 2024). In this context, higher government debt issuance can stimulate private credit, particularly in settings where credit constraints are more severe. However, in environments characterized by financial repression, greater government borrowing may instead reduce banks' ability to lend, as they are required to hold more sovereign debt (Chari et al., 2020). In such cases, fiscal consolidations may release resources to the private sector, as banks shift their asset portfolios away from public debt and toward private lending, thereby generating crowding-in effects.

This paper also adds to the literature by providing new evidence of the relationship between fiscal consolidations and private credit across a diverse set of countries. This cross-country perspective allows us to exploit variation in key structural characteristics—such as sovereign risk—that shape the extent to which fiscal policy generates crowding-in effects. By moving away from country-specific analysis (Auerbach et al., 2020) or an analysis based on a relative homogeneous sample (Miranda-Pinto et al., 2023), we are able to test the empirical relevance of multiple factors mediating the link between fiscal consolidation announcements and bank credit dynamics.

The rest of this paper is organized as follows. Section 2 describes the data and the empirical strategy of the paper; Section 3 presents the paper's main results, including results exploring the role played by sovereign risk; Section 4 presents extensions and robustness exercises; Section 5 concludes.

2 Data and Empirical Strategy

This section discusses the data and empirical strategy used to estimate the dynamic impacts of fiscal consolidation announcements on bank credit to the private sector.

2.1 Data

The analysis in the paper relies on several data sources, which are described below.

2.1.1 Fiscal Consolidation Announcements

The identification strategy for fiscal policy announcements is crucial to disentangling the macroeconomic effects of fiscal consolidations, as different approaches can yield distinctive—and sometimes conflicting— results (see for example the discussions in Guajardo et al., 2014; Ramey, 2017; and David et al., 2022). "Statistical measures" to identify fiscal shocks, such as changes in the cyclically adjusted primary balance, residuals recovered from VAR models,[2] or the use of real-time forecast errors, often suffer from measurement error and may capture fluctuations in fiscal variables unrelated to deliberate policy decisions, including those driven by swings in asset or commodity prices.

To address these concerns, we rely on the dataset developed by David et al. (2025), which updates and extends the high-frequency databases of fiscal policy announcements originally compiled by Beetsma et al. (2021) for advanced economies and by David et al. (2022) for emerging markets, based on the examination of official budget documents, IMF or OECD reports, or other historical records (this is in practice a version of the narrative approach to identifying fiscal shocks pioneered by Romer and Romer, 2010). A key feature of these databases is that they include only announcements representing genuine net consolidation efforts—i.e., measures expected to lead to an improvement in the fiscal balance. For instance, announcements of tax increases that are fully offset by higher expenditures are excluded. Similarly, revenue-neutral measures, such as reforms that merely shift the tax burden across taxpayers, are also omitted.

The original datasets covered fiscal policy announcements over the period 1978 to 2013 for AEs (Beetsma et al., 2021) and 2000-2018 for EMs (David et al., 2022). David et al. (2025) updates both datasets by adding fiscal consolidation announcements up to December 2023, resulting in an additional 75 announcements (34 for AEs and 41 for EMs). To compile these announcements, the authors followed the methodology outlined in David et al. (2022), relying on domestic news sources typically considered the primary economic and financial outlets in each country. These sources were accessed via the Dow Jones' Factiva online database. The list of countries used in the analysis is in Table 1.[3]

The search focused on identifying articles containing keywords such as "fiscal consolidation," "fiscal adjustment," "austerity," "tax reform," "tax adjustment," "spending cuts," "budget cuts," among others, across the 32 countries in the sample for the 2014-2023 period. The analysis was limited to articles available in English, Spanish, or Portuguese, relying exclusively on translations provided by the source outlets. Once a potentially relevant article was identified, the authors

[2]By residuals recovered from VAR models, we are referring to the traditional and still popular identification approach for fiscal shocks proposed by Blanchard and Perotti (2002) as well as approaches based on the Cholesky decomposition or sign restrictions. In a seminal contribution, Mertens and Ravn (2013) use narrative fiscal policy shocks as instruments in structural VAR models (proxy VAR approach) to address the biases introduced by some of the other strategies to identify fiscal shocks.

[3]All tables are presented in the Appendix.

conducted a detailed review to assess whether it documented a fiscal consolidation measure that met the inclusion criteria—namely a policy action that constituted a net improvement in the fiscal balance.

It is important to emphasize that the fiscal consolidation announcements identified in the dataset do not necessarily rely on an assessment of the motivation for fiscal adjustment measures to determine whether they are "exogenous" to cyclical considerations. In this regard, the set of policy actions included in our analysis differs from those identified in Romer and Romer (2010), Guajardo et al. (2014) or Carrière-Swallow et al. (2021), where particular attention is paid to isolating fiscal measures unrelated to short-term macroeconomic conditions. To account for the potential "endogenous" response of fiscal policy to credit market dynamics, our empirical analysis includes a rich set of control variables, as detailed below. Nonetheless, a subset of announcements in our dataset can be considered plausibly as exogenous, particularly those that overlap with the episodes identified by Guajardo et al. (2014) and Carrière-Swallow et al. (2021) at an annual frequency.

An important caveat is that the credibility of individual fiscal consolidation announcements is not explicitly captured in the dataset. As such, the estimated effects presented in the empirical analysis should be interpreted as reflecting the *average* level of credibility across announcements in the sample. That said, country fixed effects included in the regressions may help control for slow-moving factors—such as the credibility of the fiscal policy framework—which could partially absorb credibility-related effects on the observed outcomes.

Figure 1 describes the timing of consolidations in our database. Except for a few years, there was a steady stream of consolidation announcements in EMs between 2000 and 2018; with announcements peaking in the early 2000s and, to a lesser extent, in the aftermath of the global financial crisis (GFC). There has also been a pickup in announcements in recent years (2022-2023). In AEs announcements were rare events before the GFC, they increased in the aftermath of the GFC and during the period of sovereign distress of 2012, and have reemerged in 2022-2023.

2.1.2 Bank Credit Data

Data on bank credit at the quarterly frequency used in the paper come from from the BIS and the IMF. The latter complements the bank credit data from the BIS with alternative data sources (IFS, Haver) to include a larger number of countries. In the empirical analysis we use data on total bank credit as well as disaggregated credit to households and non-financial corporations. All bank credit series are reported in the domestic currency at market value. To obtain real values, the data is deflated using each country's GDP deflator.

2.1.3 Additional Data Sources

In addition to data on fiscal consolidations and bank credit, we incorporate several control variables from a variety of sources to account for potential drivers of credit growth and fiscal policy decisions. First, to capture the state of the business cycle, we apply the Hamilton filter to quarterly real GDP data. We also include a measure of the commodity terms-of-trade cycle based on data from Gruss

and Kebhaj (2019), to account for its potential influence on capital flows and credit conditions. Macroprudential policy data is taken from Alam et al. (2019), who compile a count of changes across 17 types of macroprudential policies that may significantly affect credit growth. Quarterly data on real exchange rates, policy rates and inflation are obtained from the IMF IFS database. Sovereign credit ratings and sovereign spreads are sourced from Fitch ratings and J.P. Morgan, respectively. Data on household indebtedness are from the IMF's global debt database (Mbaye et al., 2018). Finally, data on exchange rate regimes is sourced from Ilzetzki et al. (2019).

2.2 Empirical Strategy

To estimate the effects of fiscal consolidations on real bank credit to the private sector, we use the local projections method introduced by Jordà (2005). A key advantage of this approach is that it does not constrain the shape of the impulse response functions, making it less sensitive to model misspecification compared to traditional VAR estimates (Jorda and Taylor, 2016). Our benchmark specification, estimated at a quarterly frequency, is as follows:

$$c_{i,t+h} - c_{i,t-1} = \alpha_i^h + \gamma_t^h + \beta^h FC_{i,t} + \sum_{j=1}^{4} \delta X_{i,t-j} + \varepsilon_{i,t+h} \tag{1}$$

where c is the log of real bank credit at the quarterly frequency; α_i^h represents country fixed effects, and γ_t^h denotes time fixed effects. The variable $FC_{i,t}$ is a dummy that takes the value of one if the government announces a fiscal consolidation plan at time t, and h indicates the forecast horizon. The vector $X_{i,t}$ includes a set of control variables: real bank credit growth lagged by one quarter, lagged fiscal announcements, and measures of the output and terms-of-trade gaps[4], two factors that can influence both the likelihood of a consolidation announcement and credit growth. Additionally, $X_{i,t}$ includes a variable capturing the strength of macroprudential policies, which may affect capital flows and credit cycles, as well as ex post real interest rate to control for monetary policy stance changes. To capture the dynamics of these variables, we include four lags. Throughout the paper, the primary coefficient of interest is β^h, which measures the difference in real bank credit dynamics between periods of fiscal consolidation and periods without such consolidation.

To explore how other factors influence the relationship between fiscal consolidation announcements and bank credit, we extend the specification in (1) to allow the coefficient β^h to vary with key state-dependent variables. These include the phase of the business cycle, the exchange rate regime, the credibility of the country's fiscal policy, and the country's risk perception. Specifically, we estimate the following state-dependent local projection model:

[4]Both gaps are computed using the Hamilton filter.

$$c_{i,t+h} - c_{i,t-1} = S_{c,t} * (\alpha^h_{H,i} + \gamma^h_{H,t} + \beta^h_H FC_{i,t} + \sum_{j=1}^{4} \delta_H X_{i,t-j}) + \\ +(1 - S_{c,t}) * (\alpha^h_{L,i} + \gamma^h_{L,t} + \beta^h_L FC_{i,t} + \sum_{j=1}^{4} \delta_L X_{i,t-j}) + \varepsilon_{i,t+h} \tag{2}$$

where $S_{c,t}$ is a state variable taking value one if the variable of interest is above a certain threshold.[5]

In addition to the local projections approach, we estimate a PVAR to conduct counterfactual exercises and assess the role of the sovereign risk channel as a transmission mechanism. The PVAR includes four variables (at a quarterly frequency): the fiscal consolidation announcements, the EMBI spreads, (log) real GDP, and (log) real bank credit. The fiscal consolidation announcements enter the system as a dummy variable that equals one in the quarter of the announcement. The rest of the variables enter the system in first differences. Identification relies on block exogeneity assumptions (the fiscal consolidation dummy does not respond to bank credit dynamics) and the PVAR is estimated recursively.

Our objective in this exercise is to statistically isolate the role of sovereign risk in driving observed credit dynamics following fiscal consolidation announcements. To do so, we adopt the methodology proposed by Bachmann and Sims (2012) and implemented by David et al. (2022), constructing a hypothetical impulse response of bank credit to a consolidation announcement while holding the response of sovereign spreads fixed at zero at all forecast horizons—effectively "shutting off" the impact of fiscal consolidations on sovereign risk.[6] By comparing this hypothetical bank credit response to the actual one, our counterfactual analysis provides a measure of the importance of sovereign risk as a transmission channel for fiscal consolidation announcements.

3 Results

We begin by presenting impulse responses that illustrate the effects of consolidation announcements on bank credit over a 12-quarter horizon for the full sample of countries (Figure 2). Panel A indicates that a fiscal tightening is associated with an economically small and statistically insignificant reduction in bank credit at impact. However, over time, the effect accumulates, with the reduction exceeding 2 percent. This result is consistent with models emphasizing savings constraints and/or the impact of decreased bank balance sheet liquidity linked to the reduction in supply of government securities, as discussed earlier. Panel B demonstrates that these results are robust to including quarterly fixed effects to account for possible bank credit seasonality.

[5] In the cases when we assess heterogeneity along the degree of household indebtedness and fiscal anchoring, we interact the state variable with the fiscal consolidation announcement dummy and evaluate the interaction at the 25th and 75th percentile of the distribution in our sample.

[6] More precisely, as described in Bachmann and Sims (2012), we construct a hypothetical sequence of sovereign spread shocks, so as to force the response of spreads to consolidations to be zero at each forecast horizon.

A potential concern with the results shown in Figure 2, Panels A and B, is that we rely on a binary indicator for fiscal consolidation announcements. As such, the results reflect the average effect across all announcements, irrespective of their size. To study the intensive margin of fiscal consolidations, Figure 2, Panel C, presents results from an extension of our local projection framework in equation (1), incorporating information from David et al. (2025) and the annual consolidation database constructed in Adler et al. (2024). The latter extends previous datasets from Alesina et al. (2017), Devries et al. (2011), and Carrière-Swallow et al. (2021), by using the narrative approach to identify fiscal consolidation episodes. We assume that the size of the consolidation packages identified in Adler et al. (2024) correspond to the fiscal announcement in our sample for the same year announcement dates—that is, we attribute the annual consolidation magnitude to the relevant announcement dates. Importantly, we can only assign values to the subset of announcements in our original sample, as the database in Adler et al. (2024) includes only fiscal actions deemed as *exogenous* to the business cycle,whereas our broader dataset does not condition on the motivation behind policy actions. To match the annual data to quarterly announcements , we distribute the annual consolidation value equally across the number of announcements occurring in that year.[7]

Consistent with the results shown in Figure 2, Panels A and B, Panel C confirms that fiscal consolidations tend to have a negative impact on bank credit in the average country in our sample—and that this adverse effect is larger when the size of the consolidation package is greater. Notably, the estimated response in Panel C implies that a consolidation announcement amounting to one percent of GDP leads to a decline in bank credit credit over 12 quarters that is comparable in magnitude to the average response observed in Panels A and B. This in turn suggests that the typical consolidation episode in our sample is of approximately this size.

An additional concern is the presence of anticipation effects or pre-trends related to fiscal consolidation announcements. These could arise if agents anticipate upcoming consolidation efforts and adjust bank credit demand or supply in advance. Alternatively, the government's decision to announce a consolidation may be influenced by preceding trends in bank credit. In both cases, we would expect to see a correlation between past bank credit developments and current consolidation announcements. We find no systematic evidence that credit growth in the quarters preceding a consolidation announcement differs significantly from periods without consolidation (Figure 2, Panel E), suggesting that anticipation effects or pre-existing trends are unlikely to bias our main results.

The results presented thus far have focused on the average relationship between fiscal consolidation announcements and bank credit across all countries in our sample. However, this relationship is likely to be influenced by country-specific characteristics and prevailing macroeconomic conditions. Therefore, in the next section, we undertake a more granular analysis to explore how the impact of fiscal consolidation announcements on bank credit varies across different contexts and structural features.

[7]In the online appendix we present an alternative exercise aimed at quantifying the intensive margin of consolidations, where we use the change in the primary balance as a gauge for the size of the announcement.

3.1 Differences By Country Income Groups

We begin by investigating whether the response of bank credit to fiscal consolidation announcements differs between AEs and EMs. This distinction is relevant because some mechanisms through which fiscal consolidations influence credit—such as reductions in sovereign risk and disinflationary effects—may be more prominent in EMs. Conversely, in AEs, factors such as high household indebtedness or bank balance sheet constraints may imply that fiscal expansions, rather than consolidations, are more likely to be associated with lower interest rates and increased credit supply.

Figure 3 illustrates that there are notable differences in the response of bank credit to fiscal consolidation announcements across income groups. In AEs, fiscal consolidation announcements are associated with a 1 percent decline in bank credit four quarters after the announcement, and a 4 percent decline after three years. In contrast, we find no systematic relation between fiscal consolidation and bank credit in EMs.[8]

To further explore the differences between EMs and AEs, we undertake two additional analyses. First, we examine whether the *composition* of fiscal consolidation announcements influences the response of bank credit. Specifically, we distinguish between expenditure-based consolidations (i.e., reductions in government spending) and revenue-based consolidations (i.e., tax increases). This distinction is relevant because the composition of fiscal adjustment can shape the macroeconomic impact of consolidations—for example, by helping anchor inflation expectations (David et al., 2025), or by affecting the size of the fiscal multiplier (Alesina et al., 2017).

Figure 4 shows that the adverse effect of revenue-based consolidations on credit is typically more pronounced compared to that of expenditure-based consolidations. In AEs, revenue-based consolidations have a statistically significant effect on private credit on impact, and are associated with a cumulative 6 percent decline in bank credit after three years (Panel A). In contrast, the initial effects of expenditure-based consolidations are small and statistically insignificant, with a smaller decline, of about 4 percent, over the medium-term (Panel C). These findings are consistent with (Alesina et al., 2017), which show that revenue-based consolidations tend to have larger fiscal multipliers and, consequently, more substantial adverse effects on economic activity .

Turning to EMs, the results are broadly consistent with the standard crowding-in story. As shown in Panel B expenditure-based consolidations lead to an increase in bank credit, with statistically and economically significant effects emerging around eight quarters after the announcement. In contrast, revenue-based consolidations exhibit only small and statistically insignificant effects on bank credit.

These results help explain why a number of studies indicate that expenditure fiscal multipliers are smaller compared to tax fiscal multipliers. Expenditure-based consolidations appear to have either a positive or small negative effect on credit, thereby cushioning their impact on economic activity. In contrast, revenue-based consolidations tend to exert a more substantial drag on credit,

[8]The Online Appendix shows that the difference between AEs and EMs is robust to the estimation of a parsimonious specification that only controls for lagged real credit growth and lagged fiscal consolidation announcements, to the inclusion of future consolidation announcements, and to the inclusion of future GDP growth and inflation expectations.

amplifying their effects on activity.

Next we examine whether fiscal consolidations have differential effects on the different components of bank credit. In particular, we distinguish between their impact on household and non-financial corporate credit in both AEs and EMs. This distinction is informative, as it can shed light on whether fiscal adjustments influence the composition of bank credit and help identify whether fiscal multipliers operate more strongly through consumption or investment channels.

Figure 5 shows that in AEs both corporate credit and household credit decline following consolidation announcements, but the contraction is more pronounced for corporate credit. Specifically, household credit falls by around 2 percent after three years (Panel A), while corporate credit declines by about 4 percent over the same horizon (Panel C). These results suggest that investment-related borrowing is more sensitive to fiscal tightening than consumption-related borrowing in advanced economies.

In contrast, in EMs, fiscal consolidations are associated with increases in both household and corporate credit, although the effects are more significant, both economically and statistically, for corporate credit. This is consistent with the notion that fiscal consolidations in EMs can reduce sovereign risk, lower borrowing costs, and crowd in private investment, particularly in the corporate sector.

3.2 Fiscal Consolidations and Bank Credit: The Role Fiscal Policy Credibility and Sovereign Risk

Importantly, the relationship between fiscal consolidation announcements and bank credit may be influenced by key features of a country's fiscal policy framework. One such feature is the credibility of the consolidation announcement. Credibility has been shown to play a key role in the ability of fiscal consolidations to yield sustained reductions in sovereign spreads (David et al., 2022)[9] and in anchoring inflation expectations (David et al., 2025). Through of these channels—namely, lower sovereign spreads reducing the cost of capital, and more anchored inflation expectations raising expected real income—more credible announcements are likely to lead to less pronounced reductions in credit.

To explore the role of fiscal policy credibility in shaping the relationship between fiscal consolidations and private credit, we follow the approach in David et al. (2025). Specifically, we use IMF forecasts to calculate the deviations between the observed fiscal balance in year t and the IMF forecast for that same year produced in $t-3$. A positive value for this deviation indicates that the government delivered a more prudent fiscal outcome than was anticipated three years earlier, suggesting a stronger commitment to fiscal discipline.

Figure 6 illustrates that fiscal consolidations announcements tend to have a less adverse effect on bank credit when the countries exhibit a more prudent fiscal policy stance (i.e., when fiscal balance deviations relative to earlier IMF forecasts are positive). In such cases, our estimates indicate that

[9]The authors find that consolidation announcements that are accompanied by an IMF program, arguably making the announcement more credible, result in sharper reductions in sovereign spreads.

the effect of the announcement on credit is relatively small and statistically insignificant over the entire horizon of analysis. In contrast, announcements made by countries whose fiscal outcomes fall short of past IMF forecasts (i.e., indicating a weaker fiscal performance) are associated with significantly larger reductions in private credit—exceeding 2 percent after 12 quarters.

Another characteristic of fiscal policy that may influence the relationship between fiscal consolidations and bank credit is the level of sovereign risk. When sovereign risk is high, fiscal consolidations are more likely to reduce borrowing costs, thereby stimulating capital inflows and credit. This occurs because sovereign risk and borrowing costs are transmitted to the corporate sector, affecting firms' access to credit (Li et al., 2023), in addition to the traditional crowing-out mechanisms. As such, consolidation announcements are expected to lead to larger reductions in borrowing costs in environments where sovereign risk is initially high. Indeed, David et al. (2022) find that consolidation announcements yield larger reductions in sovereign spreads in countries with high initial spreads. Similarly, Huidrom et al. (2020), show that credit-default swaps increase (fall) more in countries with weaker fiscal positions in response to an expansionary (contractionary) fiscal shock.

Figure 7 illustrates how sovereign risk shapes the effect of fiscal consolidation announcements on credit. The impulse response is constructed from the interaction between the fiscal consolidation announcement with a dummy variable taking value one if the country has an investment grade rating at the time of the announcement, and zero otherwise. These responses indicate that, in countries with investment-grade rating, fiscal consolidations lead to a reduction in bank credit of about 1 percent after 6 quarters and about 3 percent after 12 quarters (Panel A). By contrast, in countries with non-investment grade rating (Panel B), bank credit remains virtually unchanged following fiscal consolidation announcements. This finding supports the hypothesis that consolidations in riskier sovereign contexts, by generating greater interest rate reductions due to expanded fiscal space, can crowd-in private credit.[10] We find broadly similar results when classifying countries based on the level of sovereign spreads. (Panels C and D of 7). In low-spread countries, credit tends to decline following a consolidation announcement. However, in high-spread countries, the impulse response of bank credit is positive (albeit not statistically significant).[11] These results highlight the presence of credit crowd-in effects when perceived sovereign risk is high.

Given that sovereign risk typically sets the floor for external funding costs faced by firms (Li et al., 2023), the benefits of fiscal consolidations in high-risk countries are more likely to materialize through increased bank credit to firms rather than to households. To test this hypothesis, we extend the analysis above by examining whether the sovereign risk channel affects household and corporate credit differently. Results in Figure 8 show the response of corporate and household credit to fiscal consolidation announcements in countries with high and low EMBI spreads. As shown in Panel A, corporate credit increases following a consolidation announcement in countries with high EMBI spreads, whereas it declines in countries with low spreads. A similar pattern is observed for

[10] This consistent with Magud and Pienknagura (2024), who find that fiscal consolidations in countries with non-investment grade ratings are associated with larger improvements in the investment-capital ratio.

[11] We divide countries according to the median spread in our sample. We assume that AEs are low-spread. Results are robust to focusing exclusively on EMs with available EMBI data.

household credit, albeit the increase in credit in countries with high spreads is not significant in this case. Moreover, a comparison between Panels A and C indicates that in high-risk countries the response of corporate credit is both more immediate and statistically significant compared to that of household credit.

3.3 Exploring the Relevance of the Sovereign Risk Channel: Evidence from a Counterfactual Exercise

The previous section discussed how the impact of fiscal consolidation announcements on bank credit differs between countries with high and low sovereign risk. One plausible channel through which sovereign risk mediates this relationship is through confidence effects. As shown in David et al. (2022), fiscal consolidations can lead to a decline in sovereign risk (as measured by EMBI spreads), which in turn can bolster investor confidence and mitigate the potential contractionary effects of consolidation on economic activity. Furthermore, as previously discussed, private borrowing costs in emerging markets are closely linked to sovereign borrowing costs. Consequently, a decline in sovereign risk can lower private financing costs, thereby dampening the adverse effects of fiscal consolidations on bank credit.

To formally test for the relevance of the sovereign risk channel, we conduct a counterfactual exercise using a PVAR model. Specifically, we compare the response of bank credit to fiscal consolidation announcements under two scenarios: one where all channels are active, and another where the response of sovereign spreads is artificially "shut off". This approach allows us to isolate the role of sovereign risk in the transmission of fiscal consolidations to credit. The methodology is discussed in section 2 and in more detail in Bachmann and Sims (2012) as well as David et al. (2022). This analysis focuses on EMs only, as these are the countries in our sample for which a consistent and homogeneous measure for sovereign spread is available.

The results are summarized in the impulse responses presented in Figure 9, which compare the estimated response of real bank credit to fiscal consolidation announcements in the baseline model and the counterfactual scenario where sovereign spreads remain unchanged. The findings reinforce the earlier results on the critical role of the sovereign risk channel in cushioning the effects of consolidations on credit. Specifically, the decline in credit would be more than 50 percent larger if sovereign spreads did not adjust following a consolidation announcement. Furthermore, as shown in the right panel of Figure 9, the difference between the observed and counterfactual responses is both economically and statistically significant.

4 Additional Results

This section presents results for additional factors that may influence the relationship between fiscal consolidation announcements and bank credit, including the phase of the business cycle, the level of household indebtedness, the exchange rate regime, and the composition of the fiscal adjustment package.

4.1 Fiscal Consolidation and Bank Credit Along the Business Cycle

Auerbach and Gorodnichenko (2012) find that fiscal multipliers tend to be larger during periods of economic slack, a result that is consistent with the findings of Jordà and Taylor (2016), who show that the effects austerity are more pronounced during economic downturns.[12] Against this backdrop, we explore whether the effects of consolidation announcements on private credit differ along the business cycle.

Our findings, summarized in Figure 10 , highlight how the credit channel shapes the way austerity may lead to deeper economic downturns during periods of economic slack. Fiscal consolidations appear to result in more pronounced reductions in bank credit when they are announced at times of economic slack (i.e., when the output gap is negative), although the results are only marginally statistically significant. In contrast, announcements made during economic booms are not systematically associated with reductions in private credit.

4.2 Fiscal Consolidations, Bank Credit and Household Indebtedness

The ability of private agents to benefit from improved credit conditions depends, in part, on their capacity to take on additional leverage. For example, Miranda-Pinto et al. (2023) develop a model in which the interest rate response to fiscal expansions varies with household indebtedness, as indebted households use the additional income generated by the fiscal impulse to deleverage, dampening the expansionary effect.

Figure 11 shows that fiscal consolidations are associated with weaker private credit growth when household leverage is initially high (Panel A). This finding is consistent with Miranda-Pinto et al. (2023), as elevated household debt reduces the responsiveness of interest rates to fiscal tightening, thereby limiting the crowding-in effects of consolidations. By contrast, when household indebtedness is low, the crowding-in effects are stronger, helping to support private credit growth (Panel B).

4.3 The Role of Exchange Rate Flexibility

In the standard Mundell-Fleming model, fiscal consolidations are associated with a real exchange rate depreciation, which bolsters exports and compresses imports while also buffering activity, thus dampening the potential adverse effects on credit demand. This adjustment process is more effective under greater exchange rate flexibility.[13]

Results in Figure 12 confirm the relevance of the exchange rate regime in mediating the relationship between fiscal consolidations and bank credit. The left-hand panel shows that, in countries

[12] However, Ramey and Zubairy (2018) find that in the case of the U.S., that the state of the economy does not necessarily affect the size of multipliers. Similar findings are reported by Alesina et al. (2017) and Carrière-Swallow et al. (2021) for a broader set of countries.

[13] There is a class of models that predict a depreciation of the exchange rate following fiscal consolidations. For example, Ravn et al. (2012) show that under deep habits, fiscal expansions lead to depreciations, contrary to the Mundell-Fleming predictions.

with a more flexible exchange rate, private credit remains broadly unaffected by fiscal consolidation announcements. As discussed, this is consistent with standard Mundell-Fleming framework, in which currency depreciation boosts exports, moderates imports and buffers economic activity. As a result, the adverse effects of fiscal consolidation on credit demand are mitigated. In contrast, in countries with fixed exchange rate regimes, interest rates must remain elevated to defend the currency peg, which in turn suppresses activity and reduces credit demand. This result is also consistent with the findings of Cloyne et al. (2020) who emphasize the importance the monetary policy response in determining the macroeconomic effects of fiscal consolidations. In less flexible exchange rate regimes, where the scope for accommodative monetary policy is limited, the adverse effects of fiscal tightening on credit are magnified.

4.4 The Composition of Fiscal Consolidation Announcements and their Impacts on Different Types of Bank Credit

Finally, we examine how the composition of fiscal consolidation announcements influences different components of bank credit. Building on the analysis above, we investigate the distinct effects of revenue-based versus expenditure-based consolidations on household and corporate credit, respectively.

The results reinforce previous findings that expenditure-based consolidations are associated with positive or negligible effects on private credit—both household and corporate—while tax-based consolidations tend to coincide with declines in real bank credit, particularly corporate credit (Figure 13). This pattern likely reflects the more direct impact of tax increases on corporate profitability relative to expenditure cuts, which can lead to more pronounced adverse effects on real credit. These findings are consistent with Beetsma et al. (2021), who document that expenditure-based consolidations have a smaller negative effect on output compared to revenue-based consolidations in a sample of European countries. Our analysis highlights the role of credit, suggesting that the sharper output decline observed following revenue-based consolidations may be partly driven by weaker corporate credit.

5 Conclusions

The evidence presented in this paper indicates that, while fiscal consolidation announcements generally leads to a reduction in bank credit, the effects of such announcements on credit vary depending on several factors. Notably, the composition of the fiscal adjustment matters: revenue-based consolidations tend to have a more pronounced adverse impact on credit—particularly corporate credit—compared to expenditure-based consolidations.

Crucially, we find that sovereign risk serves as a key transmission channel. In countries with investment-grade ratings or low sovereign spreads, fiscal consolidations are associated with reductions in bank credit. In contrast, in non-investment-grade or high-spread countries, private credit remains largely unchanged following consolidation announcements. A counterfactual exercise fur-

ther confirms that the decline in private credit would be substantially larger if EMBI spreads did not respond to fiscal consolidations, underscoring the critical role of sovereign risk reduction in lowering borrowing costs and facilitating the crowding-in of bank credit.

Future research could deepen the understanding of fiscal policy's effects by distinguishing between credit demand and credit supply responses. Other promising avenues include investigating the impact of fiscal consolidations on credit dollarization and examining how capital account openness and financial development influence the relationship between fiscal adjustments and credit dynamics.

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A Tables and Figures

Table 1: List of Countries in the Sample

Advanced Economies	Emerging Markets
Austria	Argentina
Belgium	Bolivia
Denmark	Brazil
Finland	Chile
France	Colombia
Germany	Costa Rica
Ireland	Dominican Republic
Italy	Ecuador
Netherlands	Guatemala
Portugal	Mexico
Spain	Paraguay
Sweden	Peru
United Kingdom	Uruguay
	India
	Indonesia
	Hungary
	Poland
	Slovak Republic
	South Africa

Figure 1: The Timing of Fiscal Consolidation Announcements

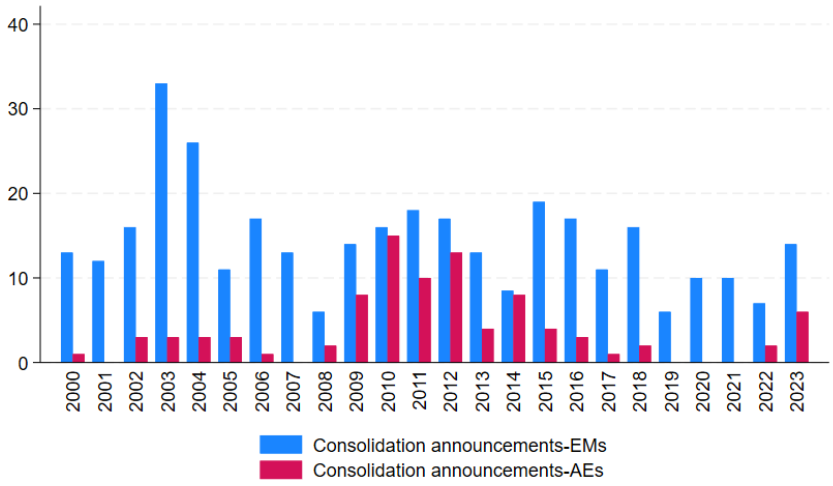
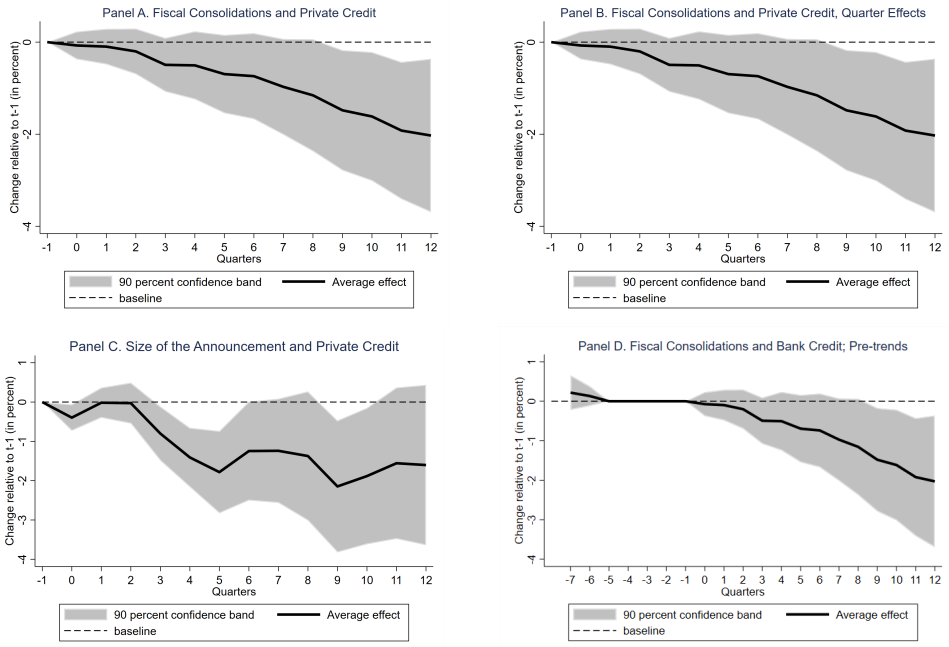
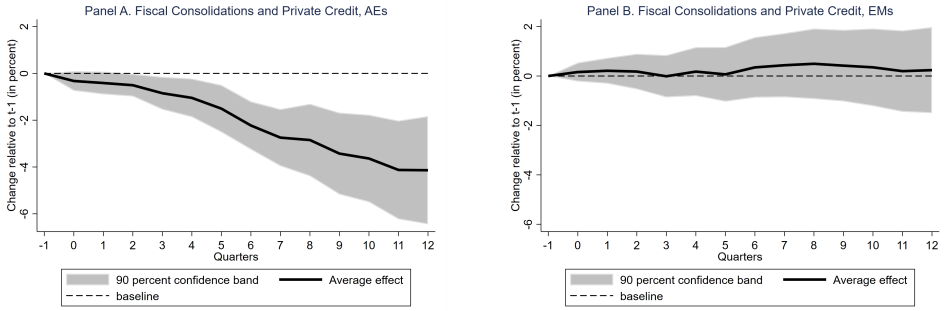


Figure 2: Fiscal Consolidation Announcements and Real Bank Credit to the Private Sector



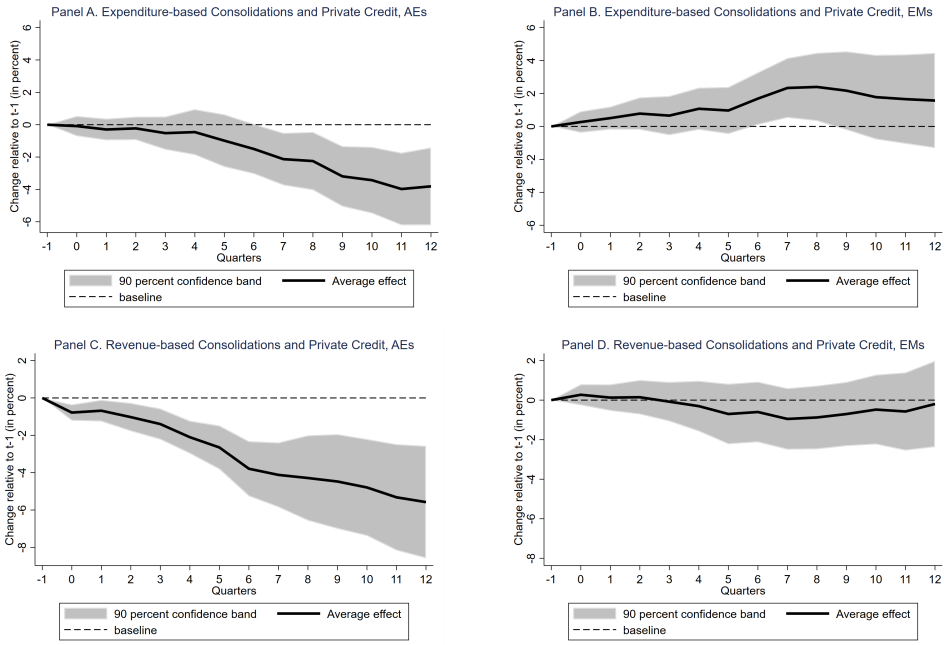
Notes: Confidence intervals are constructed using Driscoll-Kraay standard errors. "Quarters" refers to quarters since the consolidation announcement. Private credit refers to bank credit to the private sector in local currency at market value, deflated by the GDP deflator.

Figure 3: Fiscal Consolidation Announcements and Real Bank Credit to the Private Sector, by Income



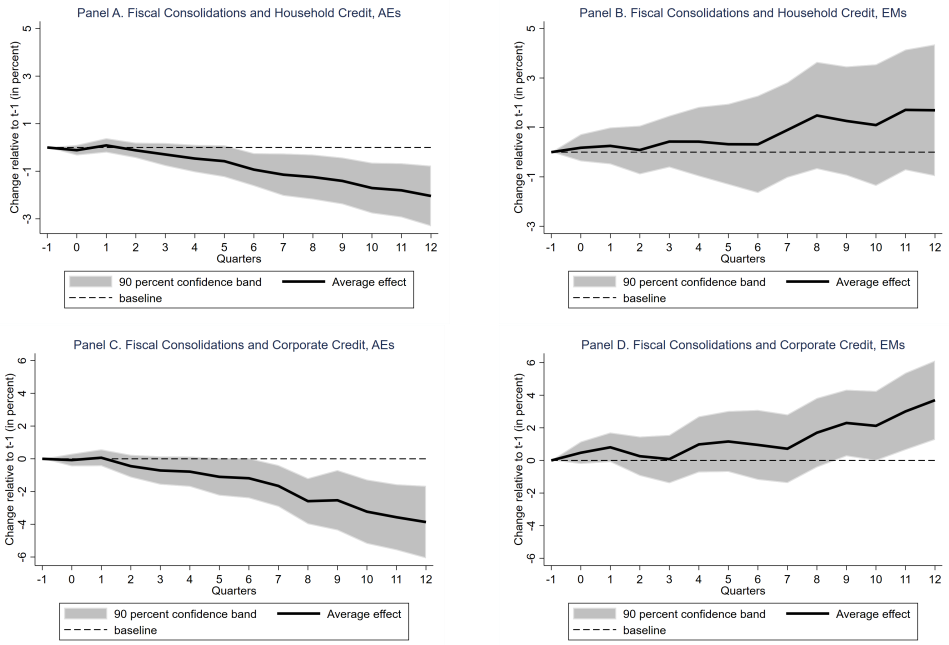
Notes: Confidence intervals are constructed using Driscoll-Kraay standard errors. "Quarters" refers to quarters since the consolidation announcement. Private credit refers to bank credit to the private sector in local currency at market value, deflated by the GDP deflator.

Figure 4: Fiscal Consolidation Announcements and Real Bank Credit to the Private Sector, by Income and Consolidation Type



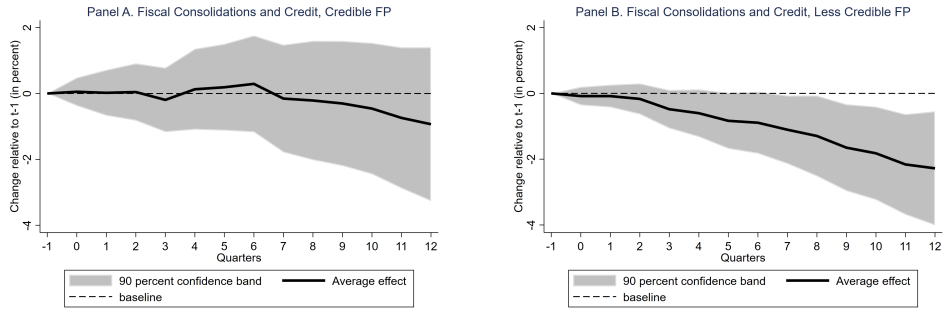
Notes: Confidence intervals are constructed using Driscoll-Kraay standard errors. "Quarters" refers to quarters since the consolidation announcement. Private credit refers to bank credit to the private sector in local currency at market value, deflated by the GDP deflator.

Figure 5: Fiscal Consolidation Announcements and Real Bank Credit to the Private Sector, by Income and Type of Credit



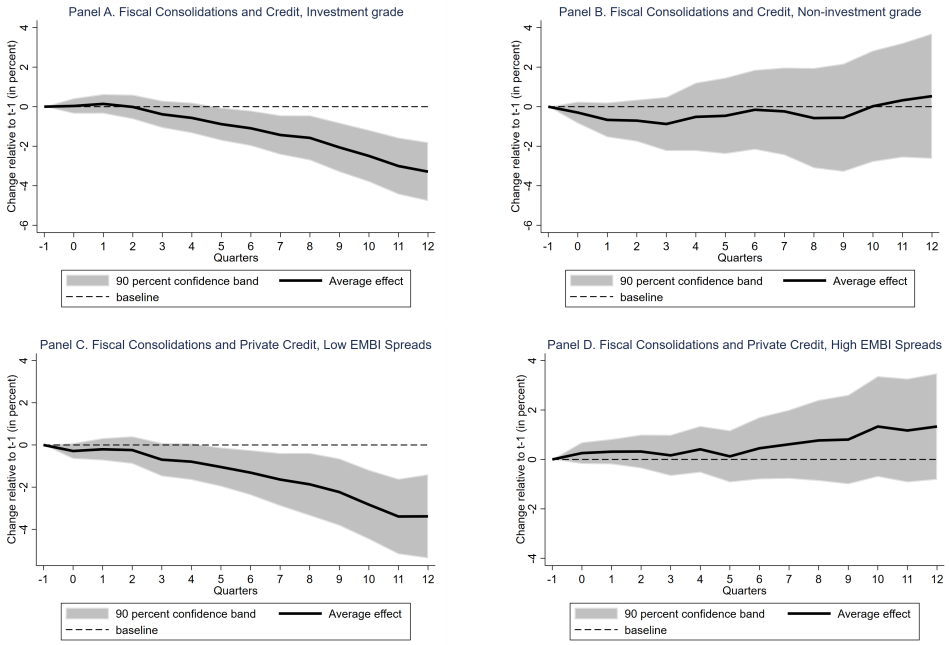
Notes: Confidence intervals are constructed using Driscoll-Kraay standard errors. "Quarters" refers to quarters since the consolidation announcement. Private credit refers to bank credit to the private sector in local currency at market value, deflated by the GDP deflator.

Figure 6: Fiscal Consolidation Announcements and Real Bank Credit to the Private Sector, by Fiscal Policy Credibility



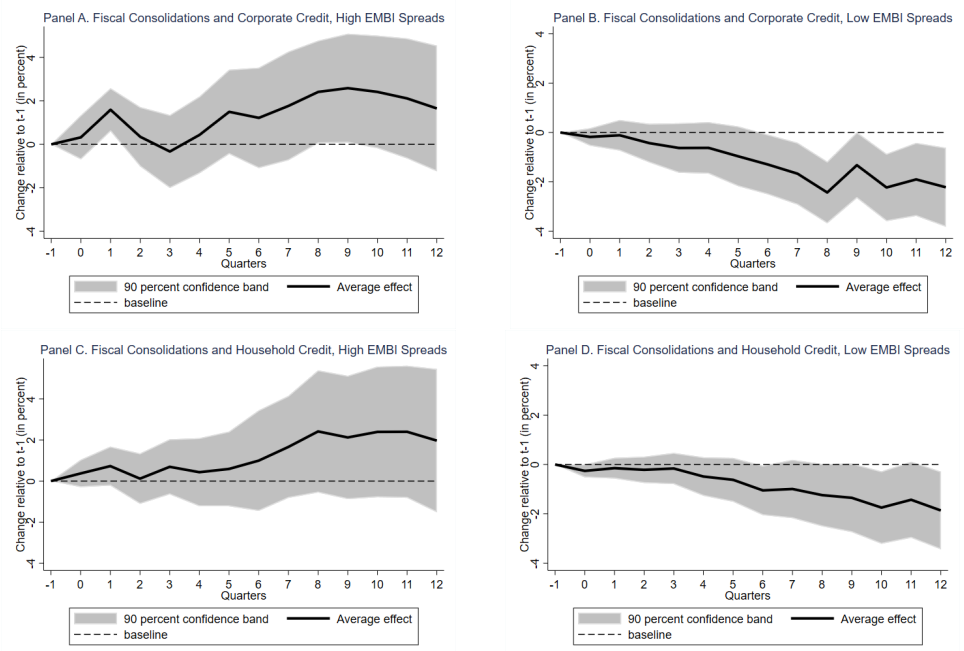
Notes: Confidence intervals are constructed using Driscoll-Kraay standard errors. "Quarters" refers to quarters since the consolidation announcement. Private credit refers to bank credit to the private sector in local currency at market value, deflated by the GDP deflator.

Figure 7: Fiscal Consolidation Announcements and Bank Credit to the Private Sector, by Sovereign Risk



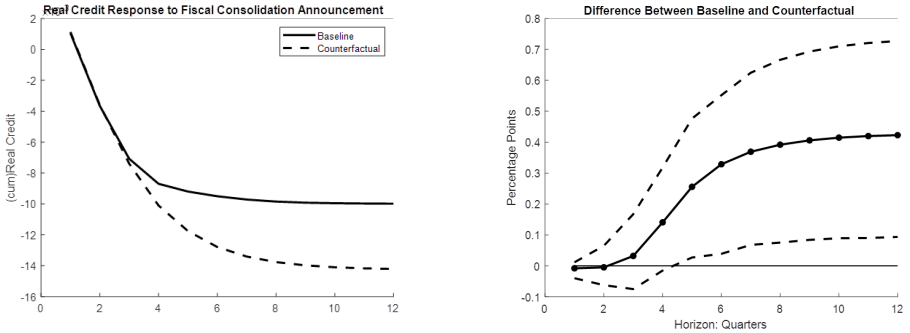
Notes: Confidence intervals are constructed using Driscoll-Kraay standard errors. "Quarters" refers to quarters since the consolidation announcement. Private credit refers to bank credit to the private sector in local currency at market value, deflated by the GDP deflator.

Figure 8: Fiscal Consolidation Announcements, Sovereign Risk, and Household and Corporate Bank Credit



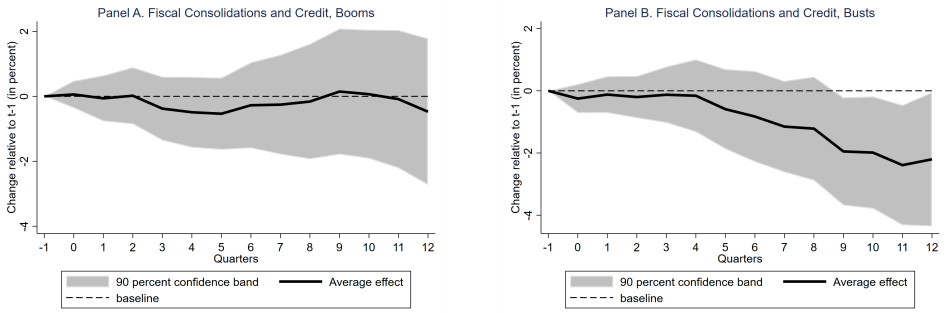
Notes: Confidence intervals are constructed using Driscoll-Kraay standard errors. "Quarters" refers to quarters since the consolidation announcement. Bank credit to households and firms in local currency at market value, deflated by the GDP deflator.

Figure 9: Fiscal Consolidation, Bank Credit and Sovereign Risk: PVAR Results



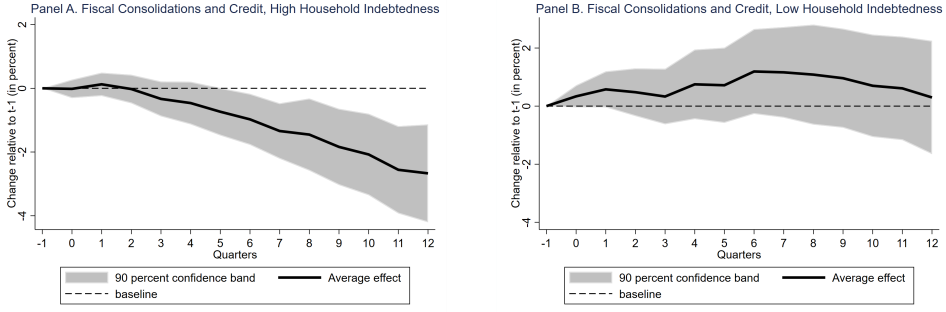
Notes: Confidence intervals are bootstraped. "Quarters" refers to quarters since the consolidation announcement. The counterfactual response refers to the response when sovereign spreads are forced to remain unchanged after the consolidation announcement. Real credit refers to bank credit to the private sector in local currency at market value, deflated by the GDP deflator.

Figure 10: Fiscal Consolidation Announcements and Bank Credit to the Private Sector, by Phase of the Business Cycle



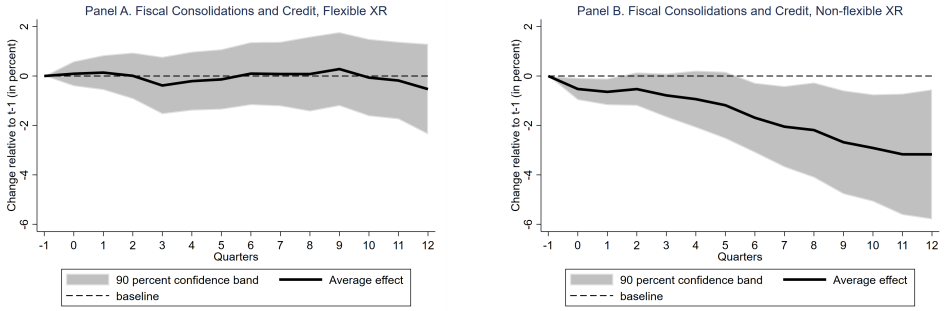
Notes: Confidence intervals are constructed using Driscoll-Kraay standard errors. "Quarters" refers to quarters since the consolidation announcement. Credit refers to bank credit to the private sector in local currency at market value, deflated by the GDP deflator.

Figure 11: Fiscal Consolidation Announcements and Bank Credit to the Private Sector, by Household Indebtedness



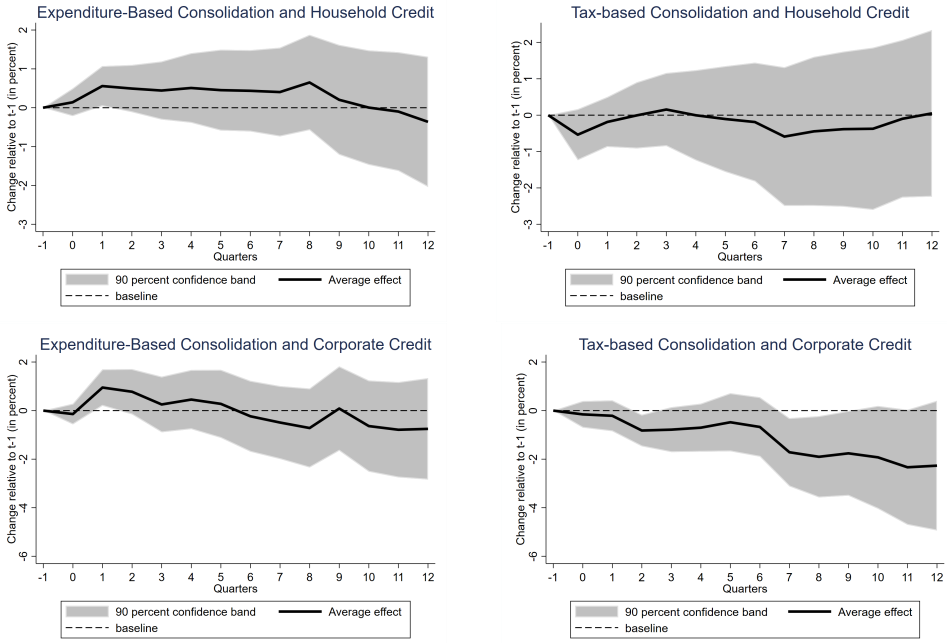
Notes: Confidence intervals are constructed using Driscoll-Kraay standard errors. "Quarters" refers to quarters since the consolidation announcement. Credit refers to bank credit to the private sector in local currency at market value, deflated by the GDP deflator.

Figure 12: Fiscal Consolidation Announcements and Bank Credit to the Private Sector, by Exchange Rate Regime



Notes: Confidence intervals are constructed using Driscoll-Kraay standard errors. "Quarters" refers to quarters since the consolidation announcement. Credit refers to bank credit to the private sector in local currency at market value, deflated by the GDP deflator.

Figure 13: The Link between the Composition of Fiscal Consolidations and Different Types of Bank Credit



Notes: Confidence intervals are constructed using Driscoll-Kraay standard errors. "Quarters" refers to quarters since the consolidation announcement. Bank credit to households and firms in local currency at market value, deflated by the GDP deflator.

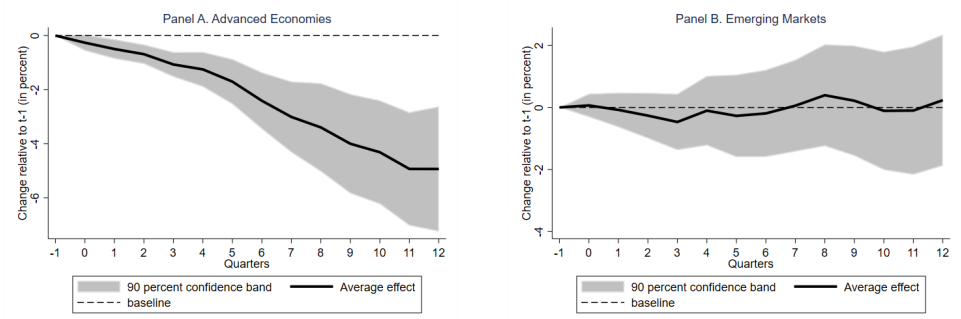
Credit where Credit is Due: Fiscal Consolidations, Sovereign Risk, and Bank Credit

Antonio C. David, Samuel Pienknagura, and Juan Yépez

Online Appendix

This online Appendix contains additional figures and tables referenced in the main text. First, we present results for a specification that controls only for lagged values of real credit growth and fiscal consolidation announcements. This more parsimonious specification expands slightly the sample of countries, as some of the control variables are not available for the full 32 countries in our consolidation sample. As shown in Figure A.1, results are robust to the estimation of this parsimonious specification.

Figure A.1: Fiscal Consolidation Announcements and Bank Credit, Parsimonious Specification



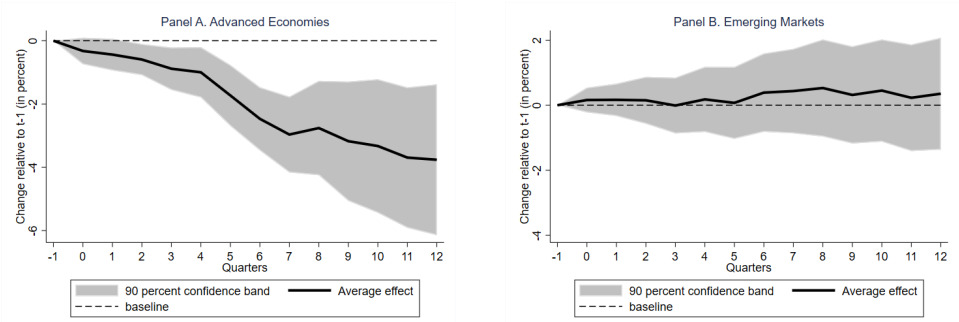
Notes: Confidence intervals are constructed using Driscoll-Kraay standard errors. "Quarters" refers to quarters since the consolidation announcement. Bank credit to households and firms in local currency at market value, deflated by the GDP deflator.

Next we expand our baseline specification by including consolidation announcements in horizon h. This assuages concerns of biases arising from the omission of future shocks to the variable of interest (Tuelings and Zubanov, 2014). As shown in Figure A.2, results are robust to such robustness exercise.

We also expand our baseline specification by including GDP growth and inflation expectations at time $t + h$. This takes into account that real bank credit may respond in anticipation of better growth prospects, which may boost household income and corporate profits, or inflation, which may affect interest rates and household income. As shown in Figure A.4, results are robust to the inclusion of future expectations.

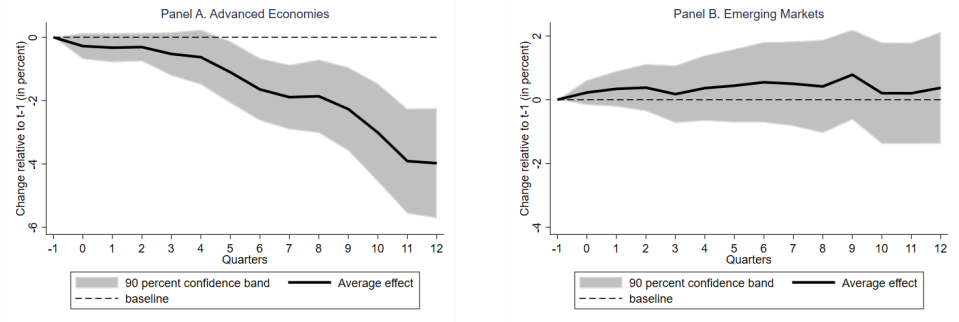
Finally, we present results for an alternative exercise aimed at gauging the impact of consolidation announcements of different size. In particular, we calculate the percentage change in the real primary balance of a country between the year following the announcement and the year of the announcement. Because data for the consolidation announcements is quarterly and the data for the fiscal balance is annual, for each announcement we calculate the weighted average of the

Figure A.2: Fiscal Consolidation Announcements and Bank Credit, Controlling for Future Consolidation Announcements



Notes: Confidence intervals are constructed using Driscoll-Kraay standard errors. "Quarters" refers to quarters since the consolidation announcement. Bank credit to households and firms in local currency at market value, deflated by the GDP deflator.

Figure A.3: Fiscal Consolidation Announcements and Bank Credit, Controlling for Future Growth and Inflation Expectations

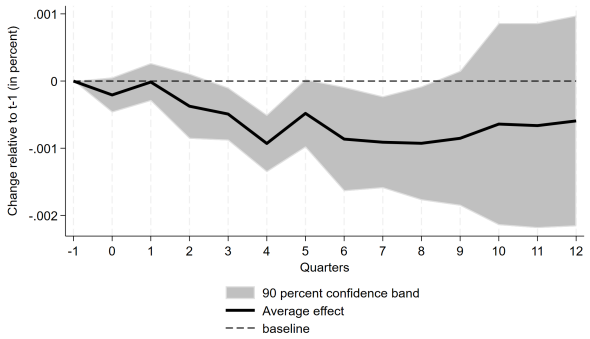


Notes: Confidence intervals are constructed using Driscoll-Kraay standard errors. "Quarters" refers to quarters since the consolidation announcement. Bank credit to households and firms in local currency at market value, deflated by the GDP deflator.

change in the primary balance between $t+1$ and t and the change in the primary balance between t and $t-1$, where the weighting scheme assigns higher weight to the former in the latter quarters of the year.[14]

[14] In particular, the weight on the first term is equal to quarter/4.

Figure A.4: The Size of the Announcements (Measured by the Change in the Primary Balance) and Bank Credit



Notes: Confidence intervals are constructed using Driscoll-Kraay standard errors. "Quarters" refers to quarters since the consolidation announcement. Bank credit to households and firms in local currency at market value, deflated by the GDP deflator.

PUBLICATIONS

Credit where Credit is Due: Fiscal Consolidations, Sovereign Risk, and Bank Credit

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