

Recessions and external imbalances*

Recesiones y desequilibrios externos

Julia Estefanía-Flores
Davide Furceri
Pablo González-Domínguez
Daniel Jiménez
International Monetary Fund

Abstract

This paper empirically examines the relationship between growth (and recessions) and current account imbalances at the global and country level. The results suggest that global current account imbalances are strongly pro-cyclical, and that the strong positive correlation between global growth and imbalances is not driven exclusively by major growth slowdowns. We also find that past recessions and financial crises, both country-specific and global ones, tend to be preceded by a building up in current account imbalances and followed by a sharp and persistent adjustment. This pattern is in marked contrast with the increase in global imbalances observed during the COVID-19 crisis.

Keywords: recessions, COVID-19, imbalances, current account.

JEL classification: F13, F15.

Resumen

Este artículo analiza empíricamente la relación entre crecimiento económico (y las recesiones) y los desequilibrios de la cuenta corriente a escala nacional y global. Los resultados sugieren que los desequilibrios globales de cuenta corriente son fuertemente procíclicos, y que la fuerte y positiva correlación entre crecimiento global y desequilibrios no está impulsada únicamente por reducciones de crecimiento de calado. También encontramos que recesiones pasadas y crisis financieras, tanto específicas de un país como las globales, tienden a estar precedidas por un incremento de desequilibrios de cuenta corriente y son seguidas por persistentes y pronunciados ajustes. Este patrón se encuentra en marcado contraste con el incremento en desequilibrios globales observado durante la crisis de la COVID-19.

Palabras claves: recesiones, COVID-19, desequilibrios, cuenta corriente.

* The views expressed in this paper are those of the authors and do not necessarily represent the views of the International Monetary Fund (IMF), its Executive Board, or IMF management.

1. Introduction

According to the IMF's 2021 External Sector Report (IMF, 2021), global current account (im)balances –measured as the sum of absolute deficits and surpluses– have increased from 2.8 percent of world GDP in 2019 to 3.2 percent of GDP in 2020, reflecting specific features of the COVID-19 health and economic crisis. First, the pandemic has led to a sharp decline in tourism arrivals, with significantly lower travel services and current account balances for tourism-dependent economies. Second, the collapse in oil demand and energy prices has been short-lived, and therefore has not resulted in a significant and persistent decline in current account balances for oil exporters. Third, there has been a surge in demand for medical products (including medicine, medical supplies and equipment, and personal protective equipment), which has led to an increase in exports for key systemic surplus economies, such as China. Fourth, household consumption has shifted from services toward consumer goods. Finally, countries worldwide launched large-scale fiscal support measures to mitigate the unprecedented output losses from the COVID-19 pandemic. The magnitude of fiscal measures has been on average larger for advanced deficit economies, such as for example the United States.

Despite the peculiarity of the COVID-19 crisis and the associated policy response, the behavior of the global current account imbalances seems in stark contrast with the large reduction in imbalances observed in the aftermath of the Global Financial Crisis (GFC). But is the GFC or the COVID-19 crisis the *norm*? In other words, should we expect current account imbalances to be pro-cyclical or counter-cyclical at the global and country level?

While there is a voluminous empirical research looking at the behavior of current imbalances around crises and the effect of external imbalances on growth (see next section), the analysis of pro-cyclicity of imbalances has received much less attention. This paper contributes to the literature by establishing robust stylized facts on the relation between growth and external imbalances, and how this relation varies across episodes of growth slowdowns –including the COVID-19 pandemic– and groups of countries –such as advanced vs. developing economies; oil exporters vs. oil importers; and deficit vs. surplus economies.

The results suggest that global current account imbalances are strongly pro-cyclical, and that the strong positive correlation between global growth and imbalances is not driven exclusively by major growth slowdowns. The degree of pro-cyclicity, however, varies across countries and tends to be stronger for advanced economies, oil importers and deficit countries. What drives pro-cyclicity in these countries is typically a larger pro-cyclicity in investment than saving, suggesting that increases (reductions) in growth are typically associated with improvements (deteriorations) in the current account for these economies. Symmetrically, we see that the positive relationship between growth and the current account balance in surplus countries is mostly driven by the pro-cyclicity of saving, while investment is a-cyclical, on average.

Turning to major growth slowdowns, we find that past recessions and financial crises, both country-specific and global, tend to be preceded by a building up in current account imbalances and followed by a sharp and persistent adjustment. Both set of results suggest that the COVID-19 crisis seems so far to be *a crisis like no other*, also regarding its effects on global imbalances.

The rest of the paper is structured as follows. In Section 2, we provide a brief review of the literature on the relationship between current account imbalances and growth. In Section 3, we present some stylized facts on the evolution of global imbalances, including how they fluctuate with the global business cycle. In Section 4, we present panel and cross-sectional analyses on the relationship between growth, recessions, and imbalances. Section 5 concludes.

2. Literature review

The empirical literature has mostly focused on four related aspects of the relationship between external positions and growth: (i) the effects of capital inflows and external balances on growth; (ii) the role of external imbalances in fueling financial crises; (iii) the adjustment of imbalances in the aftermath of crises; and (iv) the effect of crises on current account imbalances. Starting with the first stream of the literature, most studies have found on average, weak effects of capital inflows on growth (Eichengreen, 2001; Prasad et al., 2003; Prasad et al., 2007; Edison et al., 2004; Kose et al., 2009; Furceri et al., 2019). This evidence, however, masks important heterogeneity across types of flows and countries. For example, Blanchard et al. (2017) find that, while bond flows have a negative effect on activity, non-bond flows have a significant and positive effect. Kose et al. (2011) identify certain threshold levels of financial development (proxied by the depth of the credit market) that an economy needs to attain before it can benefit from capital inflows. Looking at stock imbalances, Camarero et al. (2019) find that a country's improvement of its external balance has a positive impact on growth, with the effect depending on countries' structural characteristics such as the depth of financial development, trade openness and the quality of institutions.

A second stream of the literature has examined the build-up of external imbalances prior to recessions. Bernanke (2009) and Krugman (2009) single-out global external imbalances as key contributing factors to the GFC. Both authors argue that current account surpluses in emerging markets were caused by an excess of saving over investment and easing financial conditions in deficit countries. This in turn led to downward pressures in the world interest rates triggering a credit boom in advanced economies.¹ These findings are also in line with Reinhart and Rogoff (2009), who find a positive relationship between the growing global external imbalances since the 2000s and the credit boom and credit crunch associated with the GFC.

¹ A parallel strand of the literature argues that global imbalances are a natural outcome of financial development in emerging markets. These studies include Caballero et al. (2008) and Mendoza et al. (2007), who highlight that current account imbalances have been a bifold winning game: advanced economies benefited from cheaper borrowing terms and emerging economies from higher liquidity.

Jorda et al. (2011) also find that external imbalances tend to widen in the run-up of normal crises. Similarly, Corsetti et al. (2001) provide evidence of a significant build-up of domestic and external imbalances prior to the Asian Financial Crisis.

The literature has also shown that larger external imbalances are typically followed by larger external adjustments and slower recoveries in the aftermath of crises. For example, Lane and Milesi-Ferretti (2012) find that countries with excessive pre-crisis imbalances experienced the largest contraction in external balances in the aftermath of the GFC. Freund and Warnock (2007) find that when deficit imbalances are more persistent the recovery in economic activity and the adjustment in current account usually takes longer. Similarly, Camarero et al. (2021) find that countries with larger stock imbalances tend to recover more slowly following crises.

Finally, some studies have analyzed the impact of crises on current account balances. For example, Kolerus (2021) finds that economic recessions are associated with persistent improvement in the current account balance (especially in advanced economies) due to a reduction in investment. Zooming in the current crisis, she finds that the COVID-19 shock has increased global imbalances by around 0.5 percent of global GDP. Along this line, the IMF's 2021 External Sector Report (IMF, 2021) argues that this widening of current account balances reflects the unequal impact of the COVID-19 crisis in tourism, commodity prices, medical products, and household consumption goods.

The contribution of the paper to the literature is threefold. First, we provide key stylized facts on the relation between current account imbalances and growth, both at the global and country-specific levels. Second, we examine how this relationship varies across countries. Finally, we expand the literature on the relationship between economic crises and external imbalances by analyzing how it varies across different types of crises –such as economic recessions, financial crises and the COVID-19 induced recession.

3. Stylized facts on the evolution of global imbalances

Figure 1 depicts the evolution of global current account (im)balances –defined as the sum of absolute current account deficits and surpluses– from 1980 to 2020. Countries and regions in the upper (lower) section of the figure are those with current account surpluses (deficits).

Global current account imbalances have remained broadly stable from the 80s to the mid-90s. The 80s were characterized for being a period of higher global financial integration where the strong imbalances caused by the oil crises of the late 70s were left behind. This period also coincided with a move towards the stabilization of exchange rates. After the Asian financial crisis (1997-1998), global external imbalances started to build-up again as the crisis led to an increase of precautionary saving in the Asian region. In this context, Asian economies started running surpluses supported by strong currency depreciations. At the same time, the United States, who

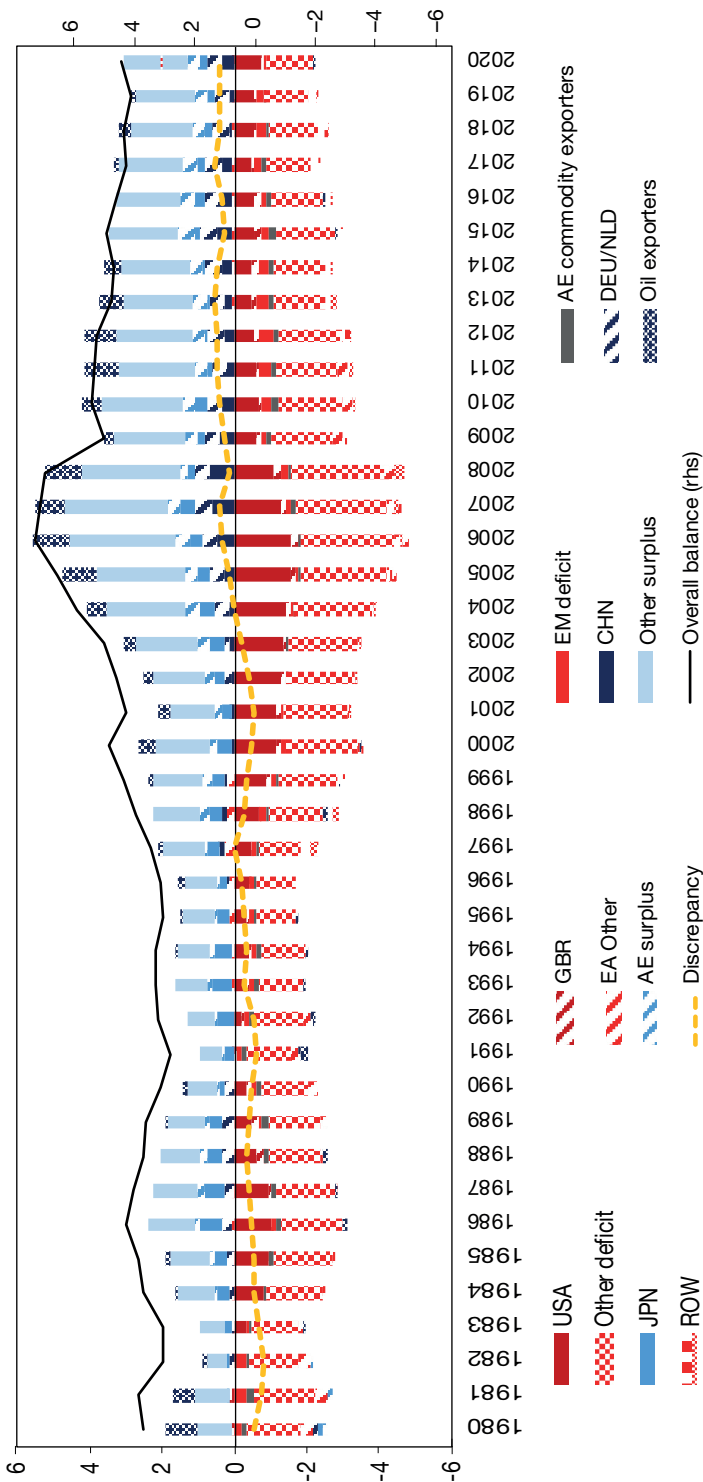
was already running current account deficits, experienced a further deterioration in its imbalances, increasing from -1.5% in 1996 to -3.9% of GDP in 2000. The momentum in imbalances had a short-lived decline associated with the burst of the Dot-Com Bubble in the early 2000s. But a few years later, the decline in global interest rates fueled the real estate sector investment boom in key deficit countries—such as the United States and some southern European economies—while the exceptional growth momentum in China and oil exporting economies led to a further increase in their (excess) saving. Therefore, the period just before the GFC saw countries further widening their external imbalances and the period that followed the GFC was characterized by an adjustment in global external imbalances. In particular, countries with excessive pre-crisis imbalances experienced the largest contractions in their external balances, in line with the findings of Lane and Milesi-Ferretti (2012). This period of adjustment ended in 2020 with the onset of the COVID-19 crisis. As discussed earlier, global current account balances started to widen again, increasing from 2.8% of world GDP in 2019 to 3.2% in 2020. According to IMF (2021), the widening in global current account balances reflects COVID-19 specific factors—such as the effect on travel and tourism, medical goods, and household consumption goods sectors—and “net of these factors, the global current account balance in 2020 would have been slightly *lower* than in 2019”.

How global current account imbalances have fluctuated around global recessions? To answer this question, Figure 2 presents the evolution of the absolute value of the global current account balances and real GDP growth from 1980 to 2020. We include grey shaded areas to highlight periods of global recessions—as those identified by Kose et al. (2020): (i) the 1982 crisis caused by the oil shock, the change in the monetary policy framework in the US—shifting to a monetary policy targeting regime—and the Latin American debt crisis; (ii) the 1991 crisis driven by the oil price shock; (iii) the GFC in 2008-2009; and (iv) the COVID-19 crisis.

The patterns depicted in Figure 2 strongly suggest that global current account imbalances and real GDP growth have comoved strongly before the COVID-19 crisis—the average correlation for the entire period excluding the year 2020 is about 0.5—with both global GDP growth and current account imbalances declining sharply during the major global crises of the 80s, 90s and early 2000s. Interestingly, this strong correlation is not driven exclusively by major crises, as periods of global economic expansions are also associated with rising current account imbalances—the correlation between global real GDP growth and current account imbalances in non-recession periods is about 0.6.

In sum, this evidence seems to suggest that the COVID-19 crisis is an exception, and that current account balances—the absolute sum of deficits and surpluses—are strongly pro-cyclical at the global level. The next section will empirically explore whether this pro-cyclical pattern at the global level is also observable for most countries, or whether is driven by the relationship between growth and current account balance in specific groups of countries.

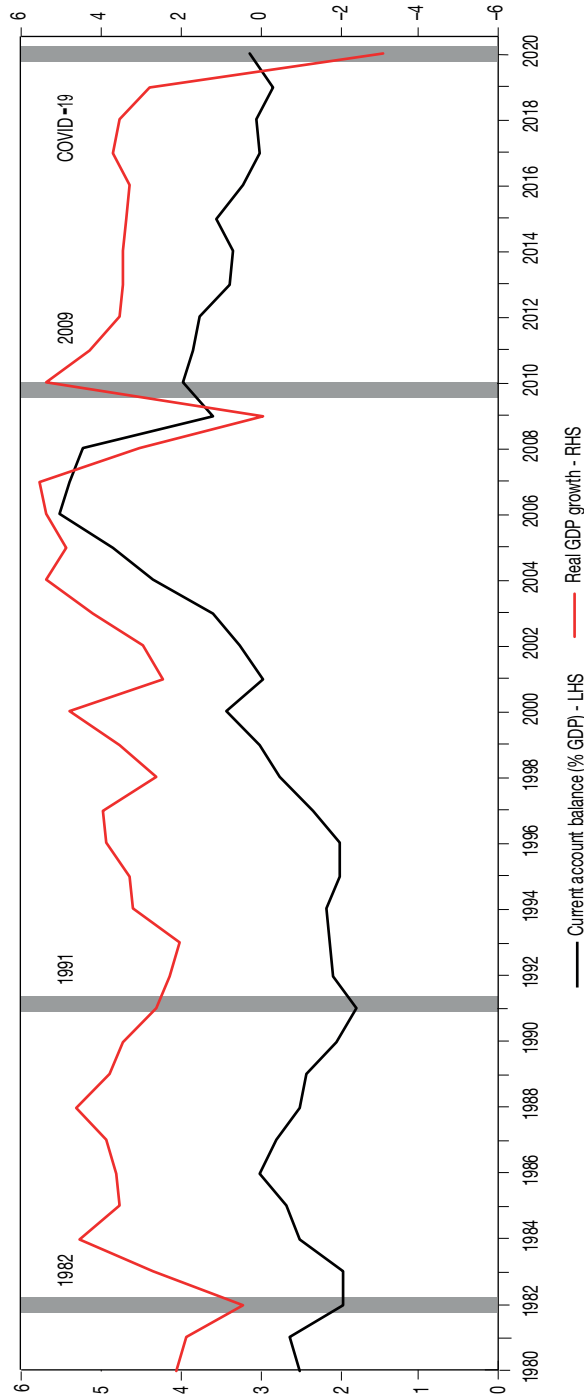
FIGURE 1
EVOLUTION OF GLOBAL CURRENT ACCOUNT IMBALANCES
(% of world GDP)



NOTE: Overall balance is the absolute sum of global surpluses and deficits. AE commodity exporters comprise Australia, Canada, and New Zealand; deficit EM comprise Brazil, Chile, India, Indonesia, Mexico, Peru, South Africa, and Turkey; oil exporters comprise WEO definition plus Norway; surplus AEs comprise Hong Kong SAR, Korea, Singapore, Sweden, Switzerland, and Taiwan Province of China. Other deficit (surplus) comprises all other economies running current account deficits (surpluses).

SOURCE: World Economic Outlook October 2021.

FIGURE 2. EVOLUTION OF GLOBAL CURRENT ACCOUNT IMBALANCES, GROWTH AND GLOBAL RECESSIONS
(% of world GDP)



NOTE: Grey shaded areas depict global recessions.

SOURCE: World Economic Outlook October 2021 and Kose et al. (2020).

4. Analysis

4.1. Cyclicity of current account balances

To explore the cyclicity in the absolute current account balance, we estimate the following regression:

$$\left| \frac{CA}{GDP} \right|_{i,t} = \beta * Growth_{i,t} + \alpha_i + \varepsilon_{i,t} \quad (1)$$

where $\left| \frac{CA}{GDP} \right|$ denotes the absolute value of the current account balance as a share of GDP and $Growth$ denotes real GDP growth; α_i are country fixed effects, which are included to control for non-observable factors affecting differences in countries' average absolute value of current account/GDP balance and GDP growth; t denotes years. β is our coefficient of interest, with a positive (negative/zero) value indicating that current account balances are pro-cyclical (counter-cyclical/a-cyclical).

Equation (1) is estimated using a yearly unbalanced sample of 200 countries from 1961 to 2019. Note that we do not include time fixed effects as controls as they would absorb much of the variation in growth and current account balances during global recessions. The results, presented in the first column of Table 1, suggest that, on average, there is a positive relationship between growth and the absolute value of the current account balance, but the relation is not precisely estimated and statistically significant at standard confidence levels. In particular, we find that 1 percent increase in growth is associated with a 0.3 percentage point increase of GDP in the absolute value of the current account balance.

This result seems to suggest that the strong positive relation between growth and current account imbalances that we see at the global level it is not necessarily a systematic pattern that emerges for the average country in the sample. Thus, which countries or groups of countries are driving the relation at the global level? To answer this question, we allow the relationship between growth and current account balances to vary across groups of countries –such as advanced vs. developing economies; oil exporters vs. oil importers; and deficit vs. surplus economies. In particular, we have extended Equation (1) to include an interaction term between the country growth rate and the group dummy Z_i :

$$\left| \frac{CA}{GDP} \right|_{i,t} = Z_i[\beta_1 * Growth_{i,t}] + (1 - Z_i)[\beta_2 * Growth_{i,t}] + \alpha_i + \varepsilon_{i,t} \quad (2)$$

The results of this exercise are reported in columns (2)-(4) of Table 1. Starting with the relationship across income-level groups, we find that the real GDP growth in advanced economies is strongly and statistically significantly associated with current account balances, while for emerging market and developing economies

TABLE 1
CURRENT ACCOUNT IMBALANCES –ABSOLUTE DEFICIT AND SURPLUS–
AND GROWTH

Variables	(1) ICA/GDPI	(2) ICA/GDPI	(3) ICA/GDPI	(4) ICA/GDPI
Growth Rate	0.0328 (0.0429)			
Growth Rate * Advanced Economies		0.0829*** (0.0315)		
Growth Rate * Emerging Market and Developing Economies		0.0296 (0.0456)		
Growth Rate * Oil Exporters			0.0216 (0.0863)	
Growth Rate * Oil Importers			0.0429* (0.0257)	
Growth Rate * Surplus				-0.0398 (0.112)
Growth Rate * Deficit				0.0702** (0.0286)
Constant	7.561*** (0.202)	7.538*** (0.186)	7.537*** (0.146)	7.518*** (0.172)
Observations	8,239	8,239	8,239	8,239
R-squared	0.401	0.401	0.401	0.402
Number of countries	199	199	199	199
Country FE	Yes	Yes	Yes	Yes
Errors	Robust	Robust	Robust	Robust

NOTE: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

SOURCE: Own elaboration.

the relationship is positive but not precisely estimated (column 2). Similarly, we do find that the relation between growth and current account balance is stronger (and statistically different) for oil importers than exporters (column 3). Differentiating between deficit and surplus countries, we find that while an increase (decrease) in growth tends to widen (reduce) the current account in deficit countries, the relationship between growth and current account balance in surplus countries is negative and not statistically significant.²

Overall, these results suggest that deficit countries and advanced economies are the key drivers of the relationship between growth and current account balances at the global level. This is consistent with the evidence presented in Kolerus (2021),

² Deficit (surplus) countries are those with an average negative (positive) current account balance over the entire estimation sample.

suggesting that major growth slowdowns in advanced economies have been associated with an improvement in the current account balance.

The results are robust to alternative checks. First, we augment our specification to include time fixed effects as control variable. As discussed before, this is equivalent to control for global shocks (recessions) and therefore considering only the relation between country-specific growth and imbalances. The results of this regression are reported in Table A2.1 of the Appendix and confirm a positive relation between domestic growth and imbalances, mostly driven by advanced economies and deficit countries.

Second, we augment the baseline specification to include standard current account determinants (see Appendix 2, Table A.2.2).³ Following a substantial body of the literature on current account balances, we include a set of variables identified in the External Balance Assessment (IMF, 2019) as key determinants of current account balances:

- i) Lag of Net Foreign Assets (NFA):⁴ on the one hand, economies with high NFA can run persistent trade deficits and remain solvent. On the other hand, economies with high NFA can benefit from net foreign income flows creating a positive relationship between current account balance and NFA.
- ii) Oil trade balance: higher oil prices increase the current account balance of oil exporting economies and decrease the balance of oil importing.
- iii) Demographic indicators: we use three demographic indicators. a) age dependency ratio (a higher share of inactive population reduces savings and decreases the current account balance), and b) life expectancy at birth (countries save more with higher life expectancy, increasing the current account balance).
- iv) Current health expenditure (% GDP): an increase in health expenditure may reduce household's need for precautionary savings, decreasing the current account balance.

The inclusion of these controls reduces the estimation sample. Over this sample, we find that current account imbalances are procyclical, on average, with the relationship between growth and current account imbalances being stronger for advanced economies (column 1-2, Table A2.2). In contrast, we do not observe a large statistical difference between oil exporters and importers, and surplus and deficit groups (columns 3-4). Importantly, the inclusion of the control variables does not affect the estimates (columns 5-8).

Third, while our model accounts for unobserved cross-country heterogeneity and controls for the different determinants of the current account balance, there is still a risk of omitted variable bias and potential reverse causality. To address these issues,

³ The current account factors selected as controls are those included in the External Balance Assessment (EBA) (IMF, 2019). The EBA is aimed to determine the appropriate levels of imbalances for a certain country considering countries fundamentals and desired policies over the medium term, therefore, it includes a set of cyclical, structural and macroeconomic factors that are understood to have an impact on countries imbalances.

⁴ A lag is entered in the equation to avoid capturing the reverse link from current account balance to NFA.

we instrument GDP growth with the following set of instruments: i) lagged GDP growth; ii) a dummy for pandemic episodes and iii) a dummy for natural disasters. While the instruments are strongly correlated with GDP growth (as indicated by the F-test of the first stage) they are unlikely to satisfy the exclusion restriction. That said, the results also in this case are similar to, and not statistically different from the baseline e (Table A.2.3).

To further explore the relationship between growth and current account balances, we re-estimate equations (1) and (2) using as alternative dependent variables saving and investment as a percent of GDP. The results are reported in Table 2. Starting with the overall sample, we see that real GDP growth is positively and statistically significantly associated with both saving and investment. The effect is stronger for saving than investment, suggesting that an increase in growth is associated with an improvement in the current account balance, on average. This result, however, masks important heterogeneity across countries. For advanced economies, oil importers and deficit countries the effect of growth on saving is larger than that on investment, while the opposite is true for emerging markets and developing economies, oil exporters and surplus countries. Importantly, the results suggest that an increase (reduction) in growth further widen deficits in deficit countries and surpluses in surplus countries.

4.2 Recessions and Current Account Balances

In this section, we examine how current account imbalances behave before and after economic recessions. To analyze these dynamics, we estimate the following equation for a yearly unbalanced sample of 189 countries⁵ from 1961 to 2019, using ordinary least squares (OLS) for $k = -5, \dots, 0, \dots, 5$:

$$\left| \frac{CA}{GDP} \right|_{i,t+k} = \beta^k rec_{i,t} + \alpha_i^k + \varepsilon_t^k \quad (3)$$

where i index countries, t refers to years, and k denotes the horizon (the years after/before the recession) being considered. α_i are country fixed effects included to take account of differences in countries' average current account balances; rec denotes the dummy used to account for recessions—that is, a dummy that is equal to 1 for those years when a recession occurs for a country i , and zero otherwise. The coefficient β^k denotes the “impact” of recessions on the absolute level of current account balances at a given horizon k . For the main results, we use a recession dummy—from Deb et al. (2021), defined as periods of negative real GDP growth—but we also explicitly consider the role of financial crises as an extension and robustness check.

⁵ The sample for this analysis is slightly smaller compared to the previous analysis because of the availability of recession data in our source (Deb et al., 2021).

TABLE 2
SAVING AND INVESTMENT AND GROWTH

Variables	(1) Saving/ GDP	(5) Investment/ GDP	(2) Saving/ GDP	(6) Investment/ GDP	(3) Saving/ GDP	(7) Investment/ GDP	(4) Saving/ GDP	(8) Investment/ GDP
Growth Rate	0.247*** (0.0805)	0.185** (0.0720)						
Growth Rate * Advanced Economies			0.288*** (0.0467)	0.395*** (0.0530)				
Growth Rate * Emerging Market and Developing Economies			0.243*** (0.0868)	0.167** (0.0781)				
Growth Rate * Oil Exporters					0.269* (0.150)	0.125 (0.136)		
Growth Rate * Oil Importers					0.223*** (0.0444)	0.249*** (0.0342)		
Growth Rate * Surplus							0.344* (0.200)	0.0603 (0.179)
Growth Rate * Deficit							0.186*** (0.0382)	0.262*** (0.0330)
Constant	21.06*** (0.366)	23.62*** (0.324)	21.04*** (0.333)	23.51*** (0.292)	21.13*** (0.246)	23.44*** (0.198)	21.16*** (0.275)	23.50*** (0.239)
Observations	6,975	7,243	6,975	7,243	6,975	7,243	6,975	7,243
R-squared	0.412	0.363	0.412	0.364	0.412	0.364	0.412	0.365
Number of countries	199	199	199	199	199	199	199	199
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Errors	Robust	Robust	Robust	Robust	Robust	Robust	Robust	Robust

NOTE: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

SOURCE: Own elaboration.

Impulse response functions are computed using the estimated coefficients β^k , and the confidence bands associated with the estimated impulse-response functions are obtained using the estimated standard errors of the coefficients.

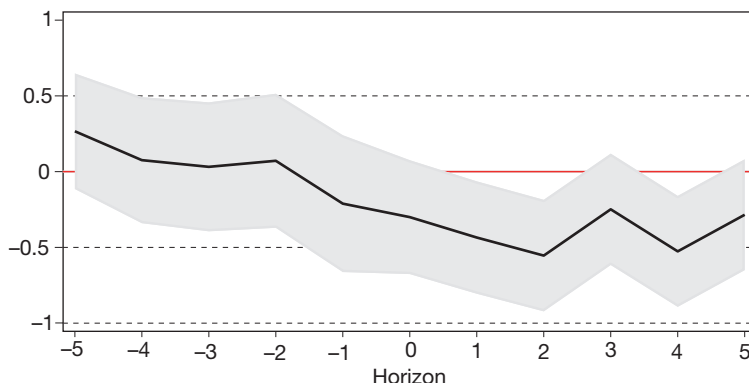
As for the previous analysis, we are also interested in understanding if there are certain country groups that are driving the average results. To account for this possibility, we extend equation (3) as follows:

$$\left| \frac{CA}{GDP} \right|_{i,t+/-k} = Z_i[\beta_1^k rec_{i,t}] + (1 - Z_i)[\beta_2^k rec_{i,t}] + \alpha_i^k + \varepsilon_i^k \quad (4)$$

where Z is a dummy variable defined as in Equation (2). The coefficients β_1^k and β_2^k capture the recessions' impact on the absolute value of the current account balance at horizon k for the various groups considered (advanced vs. developing economies; oil exporters vs. oil importers; and deficit vs. surplus economies).⁶

Figure 3 presents the results obtained estimating equation (3) for each horizon k . The estimated coefficients reported in the figure imply that, for the average country in the sample, current account imbalances are higher than the country-specific average 5 year ahead of recessions, and lower than average since the onset of a recession. In other words, recessions seem to be preceded by a building up in current account imbalances and followed by a sharp adjustment in imbalances. This result is robust when time-fixed effects are controlled for (Figure A.2.1).

FIGURE 3
RECESSIONS AND CURRENT ACCOUNT SURPLUSES AND DEFICITS
— OVERALL SAMPLE



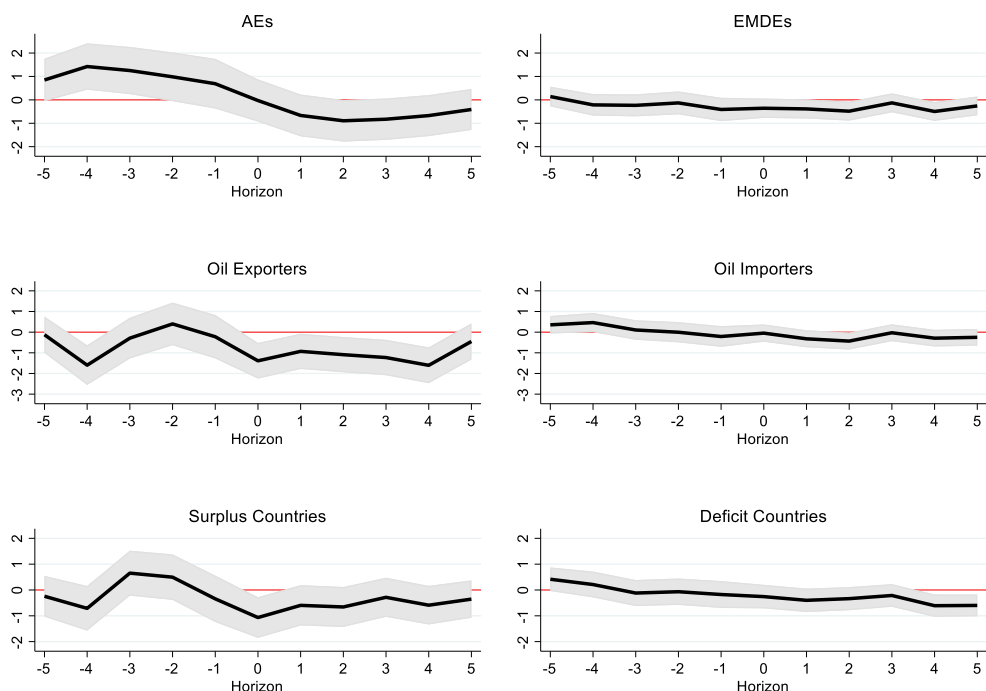
NOTE: The figure reports the evolution of the absolute value of current account deficit and surpluses before and after recessions. Horizon=0 denotes the year of a recession. The light grey shaded area indicates 90% confidence intervals.

SOURCE: Own elaboration.

⁶ Deficit (surplus) countries are defined as those with an average negative (positive) current account balance during the analyzed period around recessions ($k = -5, \dots, 0, \dots, 5$).

Figure 4 shows the results of Equation (4), differentiating the sample by country characteristics. Starting with countries at different levels of economic development, we see that advanced economies show a significant increase in imbalances in the years preceding a recession (above 1% of GDP) followed by a symmetric adjustment (around -1% of GDP) after the recession. Emerging markets and developing economies also adjust after the crisis, but do not show a strong increase in imbalances for the preceding years, on average. Oil exporters adjust sharply during recessions (over -1.5% of GDP) as oil prices typically decline, consistent with the literature on the effects of oil prices on current account balances (Kilian 2009). Finally, surplus countries are associated with higher-than-average imbalances before recessions and show a significant and persistent reduction in imbalances in the 5 years following these episodes. The adjustment after recessions is also shown for deficit countries but is less precisely estimated. This is in line with the evidence provided by Lane and

FIGURE 4
RECESSIONS AND CURRENT ACCOUNT SURPLUSES AND DEFICITS
(COUNTRY GROUPS)



NOTE: The figure reports the evolution of the absolute value of current account deficit and surpluses before and after recessions. Horizon=0 denotes the year of a recession. The light grey shaded area indicates 90% confidence intervals.

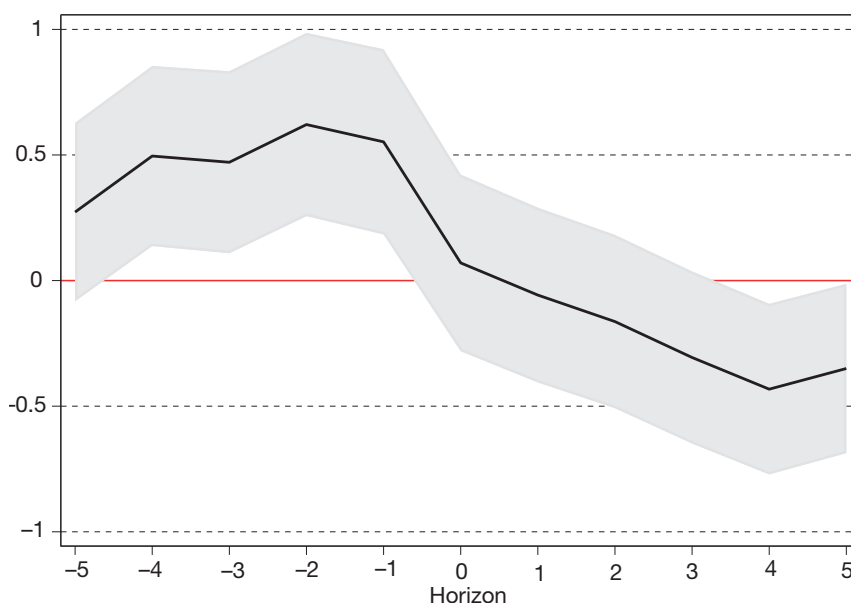
SOURCE: Own elaboration.

Milesi-Ferretti (2012) as, in our sample, surplus countries have imbalances of 1 % of GDP higher than deficit countries, on average.

Summing up, although for the average country we see that recessions are typically preceded by an increase in imbalances and followed by an adjustment, this relationship is mostly driven by the behavior of advanced economies, oil exporters and (to a lesser extent) surplus countries.

We next check whether financial crises have a differential impact compared to periods of negative growth. To analyze this, we replace the dummy for periods of negative growth with a banking crisis dummy from Global Crises Data (Reinhart et al., 2009). Figure 5 shows the results. Regular recessions and financial crises show a similar pattern for the average country, although the accumulation of imbalances in the years preceding the episode is higher (almost 0.5 % of GDP, on average) and more precisely estimated in the case of financial crises. The result is consistent with the evidence in Reinhart and Rogoff (2009) about credit booms followed by the accumulation of excessive leverage and asset price bubbles as the main drivers of financial crises.

FIGURE 5
FINANCIAL CRISIS AND CURRENT ACCOUNT SURPLUSES
AND DEFICITS (OVERALL SAMPLE)



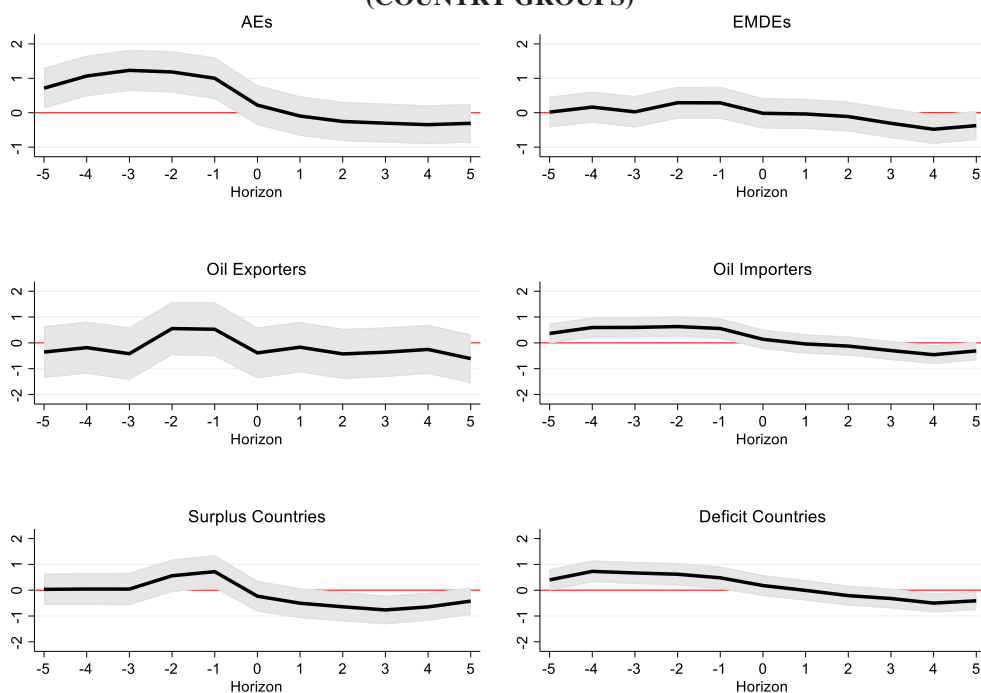
NOTE: The figure reports the evolution of the absolute value of current account deficit and surpluses before and after recessions. Horizon=0 denotes the year of a recession. The light grey shaded area indicates 90% confidence intervals.

SOURCE: Own elaboration.

Similar to the results for recessions, we see that advanced economies are characterized by a higher build-up in imbalances compared to emerging markets and developing economies in the years preceding financial crises (Figure 6). In contrast to recessions, oil importers show a significant accumulation of imbalances in the years preceding a financial crisis and an adjustment in the years after it, while the results for oil exporters are not statistically significant. The response to financial crises for surplus countries is similar to the one obtained for recessions. At the same time, for deficit countries, the accumulation of imbalances and the post-crisis adjustment is stronger (above 0.5 % of GDP) and more statistically significant compared to normal recessions.

Overall, the results suggest that regular recessions and financial crises have similar effects for the average country, though the effect is stronger in the accumulation of imbalances for the years preceding a financial crisis. As for regular recessions, advanced and surplus countries are the main drivers in this relationship, but, in

FIGURE 6
FINANCIAL CRISIS AND CURRENT ACCOUNT SURPLUSES AND DEFICITS
(COUNTRY GROUPS)



NOTE: The figure reports the evolution of the absolute value of current account deficit and surpluses before and after recessions. Horizon=0 denotes the year of a recession. The light grey shaded area indicates 90% confidence intervals.

SOURCE: Own elaboration.

the case of financial crisis, oil importers and deficit countries seem to also play an important role.

4.3 The COVID-19 crisis

As discussed earlier, the COVID-19 crisis has proven different from previous recessions even for the behavior of the current account imbalances, with global GDP growth collapsing while the sum of absolute current account deficits and surpluses has increased.

This disconnect is also evident at the country level. In Table 3, we repeat the bivariate regression between growth and the absolute value of the current account balance by augmenting Equation (1) with an interaction term between growth and a time dummy for 200 countries in 2020. Consistent with the results in Table 1, the sign is positive and insignificant for all periods excluding 2020, but the sign for the interaction term is negative as suggested by Figure 2. A similar pattern also emerges when we repeat this analysis for both saving and investment as a share of GDP (Table 4).

TABLE 3
CURRENT ACCOUNT IMBALANCES AND GROWTH
AND THE COVID-19 CRISIS

Variables	(1) ICA/GDP
Growth Rate	0.0374 (0.0426)
Growth Rate * 2020 Dummy	-0.0275 (0.0762)
Constant	7.531*** (0.198)
Observations	8,439
R-squared	0.393
Number of countries	199
Country FE	Yes
Errors	Robust

NOTE: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

SOURCE: Own elaboration.

TABLE 4
SAVING AND INVESTMENT AND COVID-19 CRISIS

Variables	(1) Savings/GDP	(2) Investment/GDP
Growth Rate	0.257*** (0.0786)	0.197*** (0.0705)
Growth Rate * 2020 Dummy	-0.991 (1.009)	-1.269 (0.967)
Constant	20.96*** (0.371)	23.49*** (0.333)
Observations	7,147	7,416
R-squared	0.400	0.360
Number of countries	199	199
Country FE	Yes	Yes
Errors	Robust	Robust

NOTE: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

SOURCE: Own elaboration.

To further explore the driving factors of the current account imbalances for 2020, we estimate the following cross-sectional regression:

$$\left| \frac{CA}{GDP} \right|_i = \alpha + \beta X_i + \varepsilon_i \quad (5)$$

where the dependent variable maintains the same definition as in previous exercises and now, we include a vector of control variables, X_i , which comprises the GDP growth rate, the stringency index of containment measures and the determinants of current account balances used in the panel analysis.⁷ The results are reported in Table 5.

Consistent with the evidence presented in Table 3 and Figure 2, the effect of growth rate on the absolute value of current account deficit and surplus is negative, statistically significant and robust across various specifications (columns 1 to 4). In contrast, stringency measures—which tend to have negative effects on economic activity, see Chetty et al. (2020) and Deb et al. (2020), among others—are negatively correlated with current account imbalances. These two results seem to contradict each other. A potential explanation is that the stringency index may capture more supply constraints and economic effects on services sectors, especially those that are contact-intensive, while the measure of GDP growth captures both demand and supply shocks affecting economic activity, as well as shocks affecting various sectors of the economy.

⁷ We use Oxford Stringency Index as a control for the severity of the COVID-19 crisis as the largest macroeconomic costs from the pandemic came from country specific containment measures (Deb et al., 2020).

TABLE 5
CURRENT ACCOUNT IMBALANCES AND EBA FACTORS DURING
COVID-19 CRISIS

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	CA/GDP	CA/GDP	CA/GDP	CA/GDP	CA/GDP	CA/GDP	CA/GDP
Growth Rate	-0.249*** (0.0530)	-0.185*** (0.0494)	-0.176*** (0.0502)	-0.0606 (0.0660)	-0.0555 (0.0686)	-0.0683 (0.0671)	-0.0658 (0.0653)
Oxford Stringency Index		-0.106*** (0.0368)	-0.112*** (0.0375)	-0.0822** (0.0407)	-0.0756* (0.0421)	-0.0418 (0.0410)	-0.0771* (0.0414)
Lag of Net Foreign Assets/GDP			-0.0271 (0.295)	-0.391 (0.368)	-0.477 (0.402)	-0.322 (0.386)	-0.538 (0.381)
Oil trade balance				1.094 (6.410)	0.854 (6.804)	2.375 (6.486)	1.580 (6.352)
Current health expenditure (% of GDP)					-0.0942 (0.179)	0.0809 (0.182)	0.313 (0.191)
Life expectancy at birth total (years)						-0.162** (0.0643)	0.0315 (0.0882)
Age dependency ratio, old (% of working-age population)							-0.201*** (0.0661)
Constant	5.563*** (0.546)	10.64*** (1.877)	10.90*** (1.901)	9.559*** (2.035)	9.746*** (2.465)	18.58*** (4.510)	7.663 (5.646)
Observations	199	175	171	157	153	152	151
R-squared	0.101	0.104	0.103	0.035	0.033	0.066	0.124
Year	2020	2020	2020	2020	2020	2020	2020

NOTE: Standard errors in (). *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

SOURCE: Own elaboration.

Among the set of control variables, we do find that countries with higher health expenditure have been associated with higher current account imbalances. This is consistent with the evidence described in IMF (2021) that the widening of imbalances also reflects the large fiscal expansion in advanced economies with current account deficits.

5. Summary and conclusion

This paper analyzes the cyclical behavior of current account imbalances. We find that past recessions and financial crises tend to be preceded by a building up in current account imbalances and followed by a sharp and persistent adjustment. Similarly, periods of global economic expansions are associated with rising current account imbalances. Panel analysis suggests that this degree of pro-cyclicality varies

markedly across countries and is stronger for advanced economies, oil importers and deficit countries.

Pro-cyclicality in current account imbalances reflects, in turn, different degree of pro-cyclicality in saving and investment across current account deficit and surplus countries. In the former group of countries, we find that investment and saving (as share of GDP) are both pro-cyclical, with investment more strongly associated with changes in growth than saving. In the latter group, we find that, while saving is pro-cyclical, investment is a-cyclical on average.

These results are in marked contrast with the increase in global imbalances observed during the COVID-19 crisis. Indeed, cross-country analysis for the year 2020 suggests a negative relationship between growth and current account imbalances. While this widening reflects several specific features of the current crisis, there is huge uncertainty on whether this break in the relationship between global current account imbalances and growth is set to stay. In this context, further research is needed to explore the ongoing dynamic of current account balances as the recovery in output growth is firming up and supply constraints related to pandemic recedes.

Experience suggests global imbalances are one of the most important channels through which financial stress is transmitted and amplified. Monitoring them and ensuring their reduction in a growth-friendly manner remains of paramount importance for the years to come.

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APPENDIX 1

Data

The main indicator used in this paper is current account balance in percent of GDP from IMF's World Economic Outlook. Since we are interested in looking at how imbalances evolve around different crises, irrespective of its sign, this indicator is used in absolute value. The indicator covers an unbalanced panel of 200 countries from 1950 to 2020. For recessions, we use two different indicators. The first is negative periods of GDP growth, calculated using GDP growth data from Pradhan et al. (forthcoming) –covering 190 countries (listed in table A1.5) from 1961 to 2019. For the second, financial crisis, we use a banking crisis dummy sourced in Global Crises Data (Reinhart et al., 2009) which covers 68 countries from 1800 to 2014.

For COVID-19 containment measures we use the Oxford's COVID-19 Government Response Tracker (OxCGRT). It collects information on government policy responses across eight dimensions, namely: (i) school closures; (ii) workplace closures; (iii) public event cancellations; (iv) gathering restrictions; (v) public transportation closures; (vi) stay-at-home orders; (vii) restrictions on internal movement; and (viii) international travel bans. The database scores the stringency of each measure ordinally, for example, depending on whether the measure is a recommendation or a requirement and whether it is targeted or nation-wide. We normalize each measure to range between 0 and 1 to make them comparable. In addition, we compute and aggregate a Stringency Index as the average of the sub-indices, again normalized to range between 0 and 1. The data start on January 1, 2020 and covers 176 countries/regions.

For the instrument used to address endogeneity concerns between growth and imbalances, we use a pandemic episodes dummy from Furceri et al. (forthcoming) and natural disasters from EM-DAT: 'The International Disaster Database'. We also include a set of controls of macroeconomic, structural, and cyclical factors affecting current account imbalances according to the External Balance Assessment (IMF, 2019). These include: Lag of Net Foreign Assets; Lag of Net Foreign Assets/GDP; Oil trade balance; Current health expenditure (% of GDP); Life expectancy at birth, total (years); and Age dependency ratio, old (% of working-age population). The coverage and source for these variables is listed in Table A.1.1.

Our current account balance and GDP growth sample includes a set of 38 advanced economies, 162 emerging market and developing economies and 29 oil exporters. For additional details on country groups see Tables A.1.2-A.1.4.

TABLE A.1.1
DATA SOURCES AND DESCRIPTION

Variable	Database	Coverage		Summary statistics				
		Countries	Time	Obs.	Mean	Std. dev.	Min	Max
Current Account Balance (%GDP)	World Economic Outlook	200	1950-2020	8,376	7.7	12.3	0.0	314.9
GDP Growth Rate	World Economic Outlook	200	1950-2020	8,922	3.8	6.3	-66.7	148.0
Savings/ GDP	World Economic Outlook	173	1950-2020	7,046	21.9	18.3	-202.9	346.2
Investment/ GDP	World Economic Outlook	174	1950-2020	7,360	24.3	14.0	-10.5	361.5
Oxford Stringency Index	Oxford Covid-19 Government Response Tracker (OxCGRT)	182	2020	182	50.0	11.7	11.8	71.8
Net Foreign Assets	External Sector Report	197	1971-2020	8,013	-5,873.5	317,952.3	-10,000,000	3,420,487
Oil Trade Balance	World Economic Outlook	177	1967-2020	6,768	0.0	0.1	-0.5	1.1
Age Dependency Ratio	World Bank - World Development Indicators	192	1970-2020	9,569	10.6	6.6	0.8	47.1
Health expenditure (% GDP)	World Bank - World Development Indicators	190	2000-2020	3,541	6.3	2.8	1.0	24.3
Life expectancy at birth	World Bank - World Development Indicators	203	1970-2020	9,620	65.8	10.7	18.9	85.4
Recessions - Periods of negative real GDP growth	Deb et al. (2021)	190	1961-2019	8,667	0.15	0.4	0.0	1.0
Banking crises	Reinhart and Rogoff (2009)	68	1800-2014	14,615.0	0.1	0.2	0.0	1.0
Pandemic episodes	Furceri et al. (forthcoming)	185	1967-2020	9,250	0.02	0.1	0.0	1.0
Natural disasters	EM-DAT. The International Disaster Database	201	1967-2020	11,353	0.4	0.4	0.0	1.0

SOURCE: Own elaboration.

TABLE A.1.2
SAMPLE OF ADVANCED ECONOMIES

Australia	Lithuania
Austria	Luxembourg
Belgium	Macao SAR
Canada	Malta
Cyprus	Netherlands
Czech Republic	New Zealand
Denmark	Norway
Estonia	Portugal
Finland	San Marino
France	Singapore
Germany	Slovak Republic
Greece	Slovenia
Hong Kong SAR	Spain
Iceland	Sweden
Ireland	Switzerland
Israel	Taiwan Province of China
Italy	United Kingdom
Japan	United States
Korea	Latvia

SOURCE: Own elaboration.

TABLE A.1.3
SAMPLE OF EMERGING MARKET DEVELOPED ECONOMIES

Afghanistan	Chad	Iran	Nauru	St. Lucia
Albania	Chile	Iraq	Nepal	St. Vincent and the Grenadines
Algeria	China	Isle of Man	Nicaragua	Sudan
Andorra	Colombia	Jamaica	Niger	Suriname
Angola	Comoros	Jersey	Nigeria	Syria
Anguilla	Congo, DR	Jordan	North Macedonia	Tajikistan
Antigua and Barbuda	Congo, Republic of	Kazakhstan	Oman	Tanzania
Argentina	Costa Rica	Kenya	Pakistan	Thailand
Armenia	Croatia	Kiribati	Palau	Timor-Leste
Aruba	Djibouti	Kosovo	Palestan	Togo
Azerbaijan	Dominica	Kuwait	Panama	Tonga
Bahamas, The	Dominican Republic	Kyrgyz Republic	Papua New Guinea	Trinidad and Tobago
Bahrain	Ecuador	Lebanon	Paraguay	Tunisia
Bangladesh	Egypt	Lesotho	Peru	Turkey
Barbados	El Salvador	Liberia	Philippines	Turkmenistan
Belarus	Equatorial Guinea	Libya	Poland	Tuvalu
Belize	Eritrea	Madagascar	Qatar	Uganda
Benin	Eswatini	Malawi	Romania	Ukraine
Bhutan	Ethiopia	Malaysia	Russia	United Arab Emirates
Bolivia	Fiji	Maldives	Rwanda	Uruguay
Bosnia and Herzegovina	Gabon	Mali	Sao Tome and Principe	Uzbekistan
Botswana	Gambia, The	Marshall Islands	Samoa	Vanuatu
Brazil	Georgia	Mauritania	Saudi Arabia	Venezuela
Brunei Darussalam	Ghana	Mauritius	Senegal	Vietnam
Bulgaria	Grenada	Mexico	Serbia	Western Sahara
Burkina Faso	Guatemala	Micronesia	Seychelles	Yemen
Burundi	Guinea	Moldova	Sierra Leone	Zambia
Cote d'Ivoire	Guinea-Bissau	Mongolia	Solomon Islands	Zimbabwe
Cabo Verde	Guyana	Montenegro	Somalia	
Cambodia	Haiti	Montserrat	South Africa	
Cameroon	Honduras	Morocco	South Sudan	
Central African Republic	Hungary	Mozambique	Sri Lanka	
	India	Myanmar	St. Kitts and Nevis	
	Indonesia	Namibia		

SOURCE: Own elaboration.

TABLE A.1.4
SAMPLE OF OIL EXPORTERS

Angola	Russia
United Arab Emirates	Saudi Arabia
Azerbaijan	South Sudan
Bahrain	Chad
Bolivia	Turkmenistan
Brunei Darussalam	Timor-Leste
Congo, Republic of	Trinidad and Tobago
Colombia	Venezuela
Algeria	Yemen
Ecuador	Gabon
Equatorial Guinea	Iran
Iraq	Kazakhstan
Kuwait	Libya
Nigeria	Oman
Qatar	

SOURCE: Own elaboration.

TABLE A.1.5
COUNTRIES WITH RECESSIONS DATA

Afghanistan	Congo,	Iceland	Mozambique	St. Kitts and Nevis
Albania	Democratic	India	Myanmar	St. Lucia
Algeria	Republic	Indonesia	Namibia	St. Vincent and
Angola	Congo,	Iran	Nauru	the Grenadines
Antigua and	Republic of	Iraq	Nepal	Sudan
Barbuda	Costa Rica	Ireland	Netherlands	Suriname
Argentina	Croatia	Israel	New Zealand	Sweden
Armenia	Cyprus	Italy	Nicaragua	Switzerland
Aruba	Czech Republic	Jamaica	Niger	Sao Tome and
Australia	Cote d'Ivoire	Japan	Nigeria	Principe
Austria	Denmark	Jordan	North Macedonia	Taiwan Province
Azerbaijan	Djibouti	Kazakhstan	Norway	of China
Bahamas, The	Dominica	Kenya	Oman	Tajikistan
Bahrain	Dominican	Kiribati	Pakistan	Tanzania
Bangladesh	Republic	Korea	Palau	Thailand
Barbados	Ecuador	Kuwait	Panama	Timor-Leste
Belarus	Egypt	Kyrgyz Republic	Papua New Guinea	Togo
Belgium	El Salvador	Lao P.D.R.	Paraguay	Tonga
Belize	Equatorial Guinea	Latvia	Peru	Trinidad and
Benin	Eritrea	Lebanon	Philippines	Tobago
Bhutan	Estonia	Lesotho	Poland	Tunisia
Bolivia	Eswatini	Liberia	Portugal	Turkey
Bosnia and	Ethiopia	Libya	Puerto Rico	Turkmenistan
Herzegovina	Fiji	Lithuania	Qatar	Tuvalu
Botswana	Finland	Luxembourg	Romania	Uganda
Brazil	France	Macao SAR	Russia	Ukraine
Brunei Darussalam	Gabon	Madagascar	Rwanda	United Arab
Bulgaria	Gambia, The	Malawi	Samoa	Emirates
Burkina Faso	Georgia	Malaysia	San Marino	United Kingdom
Burundi	Germany	Maldives	Saudi Arabia	United States
Cabo Verde	Ghana	Mali	Senegal	Uruguay
Cambodia	Greece	Malta	Serbia	Uzbekistan
Cameroon	Grenada	Marshall Islands	Seychelles	Vanuatu
Canada	Guatemala	Mauritania	Sierra Leone	Venezuela
Central African	Guinea	Mauritius	Singapore	Vietnam
Republic	Guinea-Bissau	Mexico	Slovak Republic	Yemen
Chad	Guyana	Micronesia	Slovenia	Zambia
Chile	Haiti	Moldova	Solomon Islands	Zimbabwe
China	Honduras	Mongolia	South Africa	
Colombia	Hong Kong SAR	Montenegro	Spain	
Comoros	Hungary	Morocco	Sri Lanka	

SOURCE: Pragan et al. (forthcoming).

APPENDIX 2

ROBUSTNESS CHECKS

TABLE A.2.1

CURRENT ACCOUNT IMBALANCES—ABSOLUTE DEFICIT AND SURPLUS.
COUNTRY AND TIME FIXED EFFECTS

Variables	(1) CA/GDP	(2) CA/GDP	(3) CA/GDP	(4) CA/GDP
Growth rate * Advanced economies		0.111*** (0.0363)		
Growth rate * Emerging market and developing economies		0.0167 (0.0459)		
Growth Rate	0.0217 (0.0437)			
Growth rate * Oil exporters			0.0130 (0.0866)	
Growth rate * Oil importers			0.0297 (0.0272)	
Growth rate * Surplus				-0.0532 (0.113)
Growth rate * Deficit				0.0605** (0.0296)
Constant	7.603*** (0.205)	7.559*** (0.189)	7.583*** (0.149)	7.558*** (0.174)
Observations	8,239	8,239	8,239	8,239
R-squared	0.413	0.414	0.413	0.414
Country FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Errors	Robust	Robust	Robust	Robust
No. of countries	199	199	199	199

NOTE: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

SOURCE: Own elaboration.

TABLE A.2.2
CURRENT ACCOUNT IMBALANCES—ABSOLUTE DEFICIT AND SURPLUS.
ADDING EBA FACTORS

Variables	(1) ICA/GDP 0.162*** (0.0350)	(2) ICA/GDP 0.216*** (0.0463)	(3) ICA/GDP 0.224*** (0.0627)	(4) ICA/GDP 0.273*** (0.0744)	(5) ICA/GDP 0.174*** (0.0407)	(6) ICA/GDP 0.234*** (0.0472)	(7) ICA/GDP 0.245*** (0.0813)	(8) ICA/GDP 0.278*** (0.0810)
Growth rate * Advanced economies								
Growth rate * Emerging market and developing economies								
Growth rate * Oil exporters								
Growth rate * Oil importers								
Growth rate * Surplus								
Growth rate * Deficit								
Lag of net foreign assets/GDP								
Oil trade balance								
Current health expenditure (% of GDP)								
Life expectancy at birth, total (years)								
Age dependency ratio, old (% of working-age population)								
Constant								
Observations	6.536*** (0.165)	6.529*** (0.162)	6.681*** (0.151)	6.551*** (0.167)	6.551*** (0.1546)	6.551*** (0.1646)	6.551*** (0.1283)	6.551*** (0.1432)
R-squared	3.068	3.068	3.068	3.068	3.068	3.068	3.068	3.068
Country FE	YES	YES	YES	YES	YES	YES	YES	YES
Errors	Robust	Robust	Robust	Robust	Robust	Robust	Robust	Robust
No. of countries	167	167	167	167	167	167	167	167

NOTE: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

SOURCE: Own elaboration.

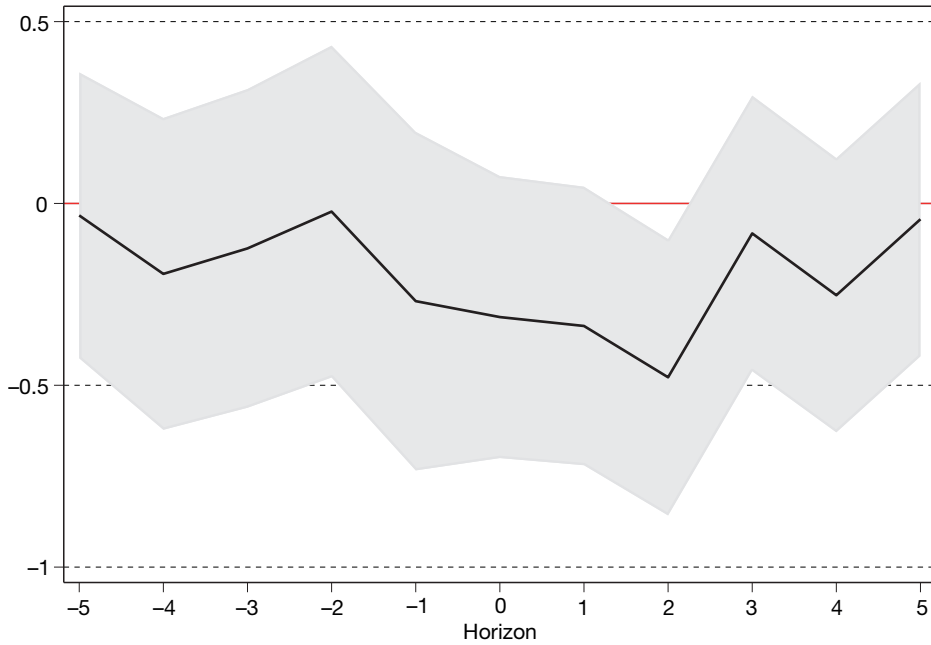
TABLE A.2.3
CURRENT ACCOUNT IMBALANCES—ABSOLUTE DEFICIT AND SURPLUS.
INSTRUMENTING GROWTH

VARIABLES	(1) ICA/GDPI	(2) ICA/GDPI	(3) ICA/GDPI
Growth rate * Advanced economies	0.144** (0.0606)		
Growth rate * Emerging market and developing economies	0.0883 (0.243)		
Growth rate * Oil exporters		0.329 (0.476)	
Growth rate * Oil importers		0.189* (0.114)	
Growth rate * Surplus			-0.771 (0.723)
Growth rate * Deficit			0.367** (0.179)
Observations	7,119	8,086	7,119
Number of countries	183	199	183
First stage	YES	YES	YES
Instrument	Growth rate lag + Pandemic episodes	Growth rate lag + pandemic episodes	Growth rate lag + Natural disasters
First stage F-statistic	71.60	19.51	85.02

NOTE: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

SOURCE: Own elaboration.

FIGURE A.2.1
RECESSIONS AND CURRENT ACCOUNT SURPLUSES AND DEFICITS—
OVERALL SAMPLE WITH TIME FIXED EFFECTS



NOTE: The figure reports the evolution of the absolute value of current account deficit and surpluses before and after recessions. Horizon=0 denotes the year of a recession. The light grey shaded area indicates 90% confidence intervals.

SOURCE: Own elaboration.