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The corporate sector and the current account*

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Abstract

In this paper, we analyze how corporate sector behavior has affected national current account balances in a sample of 25 countries for the period 1980-2015. A consistent finding is that an increase (decrease) in corporate net lending leads to an increase (decrease) in the current account, controlling for standard current account determinants. We disentangle the current account effects of corporate saving and investment and we explore a number of alternative explanations of our results, including incomplete piercing of the "corporate veil" by households, foreign direct investment activities, a temporary crisis phenomenon, and changes in income inequality. We conclude that corporate sector saving is an important driver of macroeconomic trends and that the rise of corporate net lending especially in a number of current account surplus countries has contributed considerably to global current account imbalances.

Keywords: Corporate sector, sectoral financial balances, current account determinants

JEL Classifications: D15, E21, F41, G35

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1 Introduction

In this paper, we analyze how changes in corporate sector behavior affect national current account balances. While the global rise of corporate saving recently has received growing attention (Chen et al., 2017), it also has been noted that a number of countries with persistent current account surpluses, such as Germany, Japan, the Netherlands, or South Korea, are characterized by high and rising corporate financial surpluses. By contrast, major current account deficit countries, such as the United States or the United Kingdom, feature no, or less pronounced, secular upward trends in corporate net lending (IMF, 2017).

At the theoretical level, the standard model of intertemporally optimizing households with rational expectations predicts that the saving behavior of the non-household sectors, *i.e.*, the government and the private corporate sector, has no influece on total saving and on the current account (Obstfeld and Rogoff, 1995). In particular, to the extent that households own domestic corporations, household saving behavior should offset differences in corporate saving. However, a rise (fall) in corporate saving leads to a higher (lower) current account if private households fail to see through the "corporate veil", *i.e.*, if higher (lower) corporate saving is not fully offset by lower (higher) household saving. This mechanism is conceptually similar to non-Ricardian saving behavior by households, which implies that a rise (fall) in government saving leads to a rise (fall) in aggregate saving, and hence the current account, because households fail to adjust personal savings downwards (upwards).

In standard panel estimations of current account determinants, based on the intertemporal maximization problem of the representative households in the tradition of Obstfeld and Rogoff (1995), the issue of non-household sector saving is dealt with in an asymmetric fashion. On the one hand, most current account estimations routinely test for non-Ricardian effects by introducing the fiscal balance as an explanatory variable. A robust finding is that the fiscal balance is positively linked with the current account, which is interpreted as evidence that households do not fully offset changes in government saving (e.g. Ali Abbas et al., 2011; Bluedorn and Leigh, 2011; Kumhof and Laxton, 2013; Phillips et al., 2013). By contrast, the potential current account effects linked to incomplete piercing of the corporate veil have not been systematically addressed in the existing literature. This is all the more surprising since, in an accounting sense, the main difference between current account surplus and current account deficits countries in the recent past has been that the corporate financial balance has displayed a rising trend in the surplus countries but not in the deficit countries (reflecting primarily differences in corporate saving). By contrast, household financial balances (and household saving) differ less between surplus and deficit countries (see IMF, 2017).

The contribution of the present article is to analyze the current account effects of corporate

sector behavior for a sample of 25, mainly industrialized, countries for the period 1980-2015. One important challenge is to disentangle the channels through which the corporate sector financial balance may affect the current account balance. At an accounting level, cross-country differences in corporate saving play a larger and more persistent role for current account balances than investment differentials. Including corporate sector saving in current account estimations also provides the most direct test of the corporate veil. However, we also assess the rationale for including corporate investment in addition to the standard control variables in our current account estimations, as discussed by Ca'Zorzi et al. (2012). Moreover, we consider the possibility that the current account effects of the corporate financial balance are due to international investment positions linked to foreign direct investment (FDI) activities, as suggested by Avdjiev et al. (2018). On the one hand, FDI flows may account for deviations of domestic business investment from its desired level for given values of the fundamental variables included in the current account estimation. On the other hand, differences in the accounting treatment of income derived from cross-border direct investment and portfolio investment activities may distort measures of national income, saving, and the current account. Another question that we address is to what extent the contribution of corporate net lending to current account imbalances is a temporary phenomenon that is related to the global financial crisis starting in 2007, which may have affected corporations' and households' precautionary savings motives. IMF (2017) tentatively suggests that the corporate veil thickened as a result of the crisis, noting that the time-series and cross-country correlation between corporate and household saving turned positive for the period 2009-2015. Similarly, Gruber and Kamin (2016) discuss the possibility of a structural break in corporate saving behavior caused by the global financial crisis. Finally, we ask whether the current account effects of corporate saving may be associated with changes in income inequality, a possibility discussed by Kumhof et al. (2012) and Dao and Maggi (2018). Rather than reflecting incomplete piercing of the corporate veil, a positive correlation between corporate saving and national saving may actually be due to differential saving propensities of higher-income and lower-income households. Since the former own a disproportionate share of corporate wealth, higher corporate saving may be explained through a (financial) wealth term in shareholders' utility function. In other words, shareholders may have decided, against the backdrop of higher income inequality, to keep a higher share of their rising incomes as savings within firms. Consistent with this explanation, Dao and Maggi (2018) and IMF (2018) hypothesize that higher corporate saving may reinforce the aggregate demand and current account effects stemming from rising personal income and wealth inequality.

Our main findings are as follows. Firstly, we find significant effects of changes in the corporate sector variables (the corporate financial balance or corporate saving and investment separately) on the current account balance, which are of the same order of magnitude as the effect of a change

in the government financial balance, controlling for other determinants of the current account. The current account effects of corporate saving are robust throughout our various specifications, whereas the effects of corporate investment are sensitive to the inclusion of high-investment Asian countries. Accounting for cross-country and time-series variations in corporate sector balances contributes sizably to understanding national current account balances. Secondly, the effects of corporate saving and investment persist when FDI activities are controlled for. Thirdly, we do not find evidence that the corporate veil thickened as a result of the global financial crisis starting in 2007. Since the wake of the crisis, the cross-country pattern of corporate net lending has changed somewhat, but it continues to affect national current account balances. Finally, the effects of corporate saving on the current account are unlikely to be merely the reflection of demand effects arising from changes in personal income inequality, since the effect of a rise in top household income shares on the current account balance points in the opposite direction of a rise in corporate saving.

The remainder of this paper is structured as follows. In Section 2, we review the theoretical and empirical literature relating to the macroeconomic effects of corporate sector behavior and its implications for the current account. Section 3 discusses important stylized facts about sectoral financial balances and the current account in some selected large economies with a focus on trends in corporate saving and investment. Section 4 presents the empirical analysis. Section 5 concludes.

2 Literature review

The contribution of our paper is to analyze the macroeconomic implications of corporate sector behavior within a panel estimation analysis of current account positions. It builds on three strands in the literature. Firstly, our work is related to a large body of studies that analyze current account determinants but so far has not addressed the role of the corporate sector in a rigorous fashion. Secondly, there is an emerging literature, based on sector-level and firm-level data, documenting the trend towards rising corporate net lending positions across countries in recent decades. A third strand in the literature has developed formal tests of the corporate veil, albeit not in relation to current account balances.

2.1 Current account determinants

In face of the widening of current account imbalances especially since the 1980s and prior to the global financial crisis starting in 2007, a number of competing hypotheses have been put forward. These include the twin deficit hypothesis that current accounts are driven by government deficits (Ali Abbas et al., 2011; Bluedorn and Leigh, 2011; Kumhof and Laxton, 2013); the savings-glut

hypothesis that high savings in emerging markets are responsible for their current account surpluses (Chinn and Ito, 2007); the demographic hypothesis that population structure and life-cycle savings dynamics have contributed to current account imbalances (Cooper, 2008; Dao and Jones, 2018); the asset bubble explanation that wealth effects are the main force behind saving-investment imbalances (Fratzscher and Straub, 2009); the financial-development argument that countries with deeper financial markets attract foreign saving flows resulting in current account deficits (Gruber and Kamin, 2007; Caballero et al., 2008); the structural policy hypothesis that product and labor market regulations are important drivers of current accounts (Kerdrain et al., 2010); and the income distribution hypothesis that the relative stagnation of middle class incomes has contributed to either aggregate demand deficiency and current account surpluses or debt-financed consumption and current account deficits in different countries (Kumhof et al., 2012 and Behringer and van Treeck, 2018). However, there is as of yet no consensus as to the relative importance of various factors in explaining the emergence and evolution of global imbalances. Chinn et al. (2011, p. 18) suggest the possibility of missing variables in existing estimation models.

The aforementioned hypotheses essentially focus on the household sector as the driving force behind national current account balances, in line with the underlying theoretical framework proposed by Obstfeld and Rogoff (1995). The role of the corporate sector has not been systematically addressed in the literature. Our analysis of the current account effects of corporate sector saving and investment is, however, conceptually related to two of the aforementioned hypotheses, namely, the twin deficit hypothesis and the income distribution hypothesis. In the existing literature the government financial balance is routinely included in current account panel regression analyses and it is systematically found to be quantitatively important. According to existing estimates, a 1 percentage point increase (decrease) in the fiscal balance leads to an increase (decrease) in the current account of between 0.2 and 0.5 percentage points (Lee et al., 2008; Phillips et al., 2013). The standard explanation of this finding refers to non-Ricardian behavior by households, *i.e.*, households do not fully incorporate government saving into personal saving decisions. Although corporate saving (corporate net lending) together with government saving (the fiscal balance) constitute the non-household part of domestic saving (the current account balance), corporate saving or the corporate financial balance have not been among the standard explanatory variables in the existing literature on the determinants of current account balances. Moreover, a number of recent works have pointed at a negative link between (top-end) income inequality and national current account balances (Kumhof et al., 2012; Behringer and van Treeck, 2018). To the extent that a rise in corporate saving as a percent of GDP implies a more unequal income distribution (e.g. when it is assumed that corporate retained earnings accrue proportionally to equity wealth, as suggested by Piketty et al., 2017), one may ask whether changes in corporate saving and personal income

inequality have similar macroeconomic effects in terms of current account balances (see also Dao and Maggi, 2018).

2.2 Recent changes in corporate behavior

Although the trend towards higher corporate net lending in some countries has been discussed in policy circles for some while (e.g. IMF, 2006; André et al., 2007), the academic literature has been relatively silent on the macroeconomic implications of corporate sector saving and investment. The lack of attention to corporate net lending as a potential driver of macroeconomic trends has been noted in recent literature (Gruber and Kamin, 2016; IMF, 2017; Dao and Maggi, 2018).

Chen et al. (2017) document the global rise in corporate saving using both national accounts and firm-level data. They show that, while the sectoral composition of global investment has remained largely stable over time, the sectoral composition of global saving has undergone substantial changes since 1980. In particular, saving by corporations has increased by nearly 5 percentage points relative to GDP whereas saving by household has decreased by nearly 6 percentage points (whereas government saving has not exhibited secular trends relative to GDP). While Chen et al. (2017) show, based on a general equilibrium model, that changes including declines in the real interest rate, the price of investment, corporate income taxes and increases in markups may explain the global rise in corporate saving, their descriptive analysis of national accounts data reveals sizable cross-country differences in the trends of corporate saving over time. Although Chen et al. (2017) emphasize the fact that corporate saving has increased in all ten of the world's largest economies, the rise in the corporate saving rate (corporate saving as a percentage of corporate value added) has been more than four times larger in such countries as China, Japan, and South Korea than in the United Kingdom and the United States. It has also been considerably larger in France and Germany than in the United Kingdom and the United States. However, Chen et al. (2017) do not inquire into the implications of such cross-country differences in corporate saving for current account developments.

A detailed descriptive analysis of trends in corporate sector behavior with a view to connecting with the macro literature is provided by Dao and Maggi (2018), who employ both cross-country national accounts and firm-level data. While confirming the finding by Chen et al. (2017) that the increase in corporate excess saving is a robust feature across major economies, Dao and Maggi (2018) note that the rise in corporate saving and net lending clearly has been most pronounced in countries with persistent current account surpluses. They find that the trend towards higher corporate saving is driven by rising profitability, lower financing costs, and reduced tax rates and they analyze the motives for corporations' increased cash holding at the expense of other uses of corporate saving including fixed capital investment. Although Dao and Maggi (2018) emphasize

the potentially sizable implications for current accounts across countries, they do not formally test for such effects.

Gruber and Kamin (2016) focus on corporate behavior in the aftermath of the global financial crisis that started in 2007. They demonstrate that levels of corporate net lending rose significantly in most OECD economies after the crisis and ask whether this recent upward trend constitutes a break with the past in corporate behavior. However, they conclude from their empirical analysis that the sharp declines in corporate investment after the crisis were generally consistent with past responses of investment to movements in fundamentals. In particular, they find little evidence that firms were reducing investment to strengthen their balance sheets, as payments to shareholders remained strong and were uncorrelated with investment. They conclude, therefore, that the increase in corporate net lending since the crisis must either be due to a crisis-induced structural break in corporate saving behavior, as corporate investment behaved largely as might be expected given the persistent weakness in growth, or due to endogenous responses of both investment and saving behavior to the global financial crisis. The analysis by Gruber and Kamin (2016) only superficially touches upon the question of whether cross-country differences in corporate saving and investment may contribute to current account (im)balances. In their descriptive analysis, they show that countries where corporate net lending increased relatively strongly between 2002-2008 and 2009-2015 experienced a relatively larger increase in the current account balance. However, Gruber and Kamin (2016) do not systematically examine cross-country differences in corporate saving and investment and their implications for current account balances either before or after the global financial crisis.

2.3 The corporate veil

Even although the potential importance of the corporate veil is generally recognized at the conceptual level (Atkinson, 2009), there are surprisingly few empirical analyses of the macroeconomic effects of corporate saving behavior.

It may be useful to begin the following discussion with a definition of the corporate veil. A corporate veil would exist if a shift in the distribution of an individual's wealth among corporate and non-corporate forms, holding her overall wealth constant, affected that individual's consumption (Auerbach and Hassett, 1991). In line with this definition, the following general consumption function can be used to design a formal test of the corporate veil (see Poterba, 1991):

$$C = \alpha_0 + \alpha_1 HW + \alpha_2 NHW + \alpha_3 DIV + \varepsilon \tag{1}$$

where household consumption, C, is a function of human wealth, HW, non-human wealth, NHW, and dividends, DIV. If households pierce the corporate veil and dividends convey no information about future corporate profits that is not also reflected in share values, then α_3 should be zero. Suppose a corporation decides to increase its saving, that is, to retain earnings rather than distribute them as dividends. Any sophisticated shareholder should understand that their net worth has increased and reduce their savings correspondingly in order to re-establish their optimal life-cycle consumption. By contrast, if households fail to fully see through the corporate veil, total national saving is affected by corporate profit retention policies because $\alpha_3 > 0$. In theory, $\alpha_3 > 0$ could also be due to liquidity constraints, but in practice such liquidity constraints are a lot less likely to apply to consumption supported by corporate wealth, compared with other forms of wealth, because shareholders typically are wealthier and more creditworthy than the average individual.

An alternative way in which a rise in corporate saving might influence total saving even in the absence of a "thick" corporate veil is through the distribution of income. If an increase in corporate saving as a percentage of GDP is the reflection of a higher profit share of GDP (as seems to be the case empirically, see Karabarbounis and Neiman, 2014; Chen et al., 2017; Behringer and van Treeck, 2018), then it may be associated with a change in the economy-wide saving rate if wealthier households benefit disproportionally from the rise in the profit share and have a lower marginal propensity to consume ($\alpha_2 < \alpha_1$ in Equation 1). In the empirical analysis to be presented in Section 4, we will thus control for income distribution when testing for the existence of a corporate veil in our current account estimations.

There is some formal evidence for the corporate veil in different strands of the literature that developed independently of the literature on current account determinants, but the results from previous studies are mixed. Feldstein and Fane (1973) and Feldstein (1973) found a positive marginal propensity to consume from corporate retained earnings which was, however, lower than the marginal propensity to consume from income. Similar results were found by Sumner (2004), based on estimations of the aggregate consumption function for the U.K. Poterba (1991) and Monogios and Pitelis (2004) and Baker et al. (2007) report evidence of a significant corporate veil for different Anglo Saxon countries. Grigoli et al. (2018) in a panel estimation analysis for a sample of 165 countries for the period 1981-2012 find that a rise in the corporate saving-to-gross domestic income ratio by one percentage points leads to a decrease in the household saving-to-gross domestic income ratio by 0.58 percentage points, *i.e.*, households do not fully offset the rise in corporate saving. According to the results by Bebczuk and Cavallo (2016), for a sample of 47 countries over 1995-2013, a $1 increase in business saving raises private saving by $0.6.

3 The data

This section documents a number of stylized facts of corporate sector and current account balances. We focus primarily on the G7 economies and China. These eight countries accounted for more than 60% of global GDP during the last decade. Figure 1 shows the evolution of GDP-weighted averages of corporate saving, investment and net lending for the G7 countries over the period 1980-2015.[1] It shows that corporate net lending was negative throughout the 1980s and 1990s, turned positive at the beginning of the 2000s and has remained in positive territory since then. Moreover, it is obvious from Figure 1 that the rise in corporate net lending has been driven primarily by the rise in corporate saving. Corporate investment shows cyclical fluctuations around a largely constant trend, even though the sharp decline of corporate investment during the global financial crisis after 2007 may constitute a break with the past in corporate behavior.

Figure 2 contains the same information as Figure 1, but now separately for each of the G7 countries and China. We can observe a pronounced secular upward trend in the corporate financial balance driven by a rise in corporate saving especially in Germany, Italy and Japan. By comparison, in Canada, France and the United Kingdom, variations in corporate net lending are more of a cyclical nature, and they are less clearly driven by corporate saving. In the United States, there is no clear trend over time in either corporate saving or corporate investment prior to the outbreak of the financial crisis, which triggered both a rise in corporate saving and a fall in corporate investment. In China, we observe pronounced and long-lasting swings in both corporate saving and corporate investment since 1990.

Figure 3 shows the development of current account balances and sectoral financial balances for the G7 countries and China for the period 1980-2015. China, Germany, Japan, the United Kingdom, and the United States were those countries with the largest current account balances worldwide just before the Great Recession. In Germany and Japan, in particular, the corporate sector turned from a pronounced net borrowing position in the 1980s and 1990s to a large and persistent net lending position since the late 1990s/early 2000s. The corporate sector thus accounts for a large part of the build-up of current account surpluses in these countries prior to the Great Recession. In recent years, both China and Japan have significantly reduced their current account surpluses, whereas Germany has maintained a large current account surplus of about 7 percent of GDP, which corresponds roughly to its pre-crisis level. In the case of Japan, the re-balancing of the current account in the wake of the financial crisis was due primarily to the decrease of the fiscal balance, while corporate net lending fluctuated around its pre-crisis level of 8 percent of GDP. In

[1] We do not include China here because it is a clear outlier in terms of both the corporate saving-to-GDP ratio and the corporate investment-to-GDP ratio; see Figure 2.

China, much of the pre-crisis increase of the current account balance since the 1980s, as well as the subsequent re-balancing, were driven primarily by movements in corporate net lending. The United Kingdom and the United States, the two main current account deficit countries prior to the global financial crisis, experienced large decreases in the household financial balance during the last two decades before the crisis, but no clear trend in the corporate financial balance. Overall, there is little immediate evidence of an offsetting relationship between corporate and household net lending across the G7 countries and China.

In Figure 4, we plot changes in the corporate financial balance (upper panel) against changes in the current account balance (left panel) and against changes in the household financial balance (right panel) for a sample of 25 countries (multi-year averages 1980/83 versus 2012/15). There is a clear positive relationship between changes in the corporate financial balance and the current account balance, despite a negative correlation of changes in the corporate and the household financial balance. This pattern is *prima facie* consistent with the existence of a corporate veil. Changes in corporate net lending feed through to the current account, even although they are offset in part by opposite changes in household net lending. Note that plotting changes in the government financial balance against changes in the current account and the household financial balance (lower panel of Figure 4) yields a very similar picture.

In Figure 5, we plot changes in the corporate financial balance against changes in the current account balance and the household financial balance for two sub-periods: prior to the global financial crisis (upper panel, 1980/83 versus 2004/07), and since the outbreak of the crisis (lower panel, 2004/07 versus 2012/15). Figure 5 reveals an even stronger correlation between changes in corporate net lending and the current account for both sub-periods, compared to the full sample period (see Figure 4). As can be seen in the upper panel of Figure 5, the pre-crisis emergence of current account imbalances were largely driven by differences in corporate net lending, with large increases in such large surplus countries as China, Japan, South Korea, the Netherlands and Germany, and no or smaller increases in such large deficit countries as Spain, the United Kingdom and the United States. By contrast, there was no clear relationship between changes in corporate net lending and household net lending. For example, Japan, Spain and the United States all displayed similar decreases in the household financial balance despite very different current account developments. For the post-crisis period, changes in the corporate financial balance and changes in the household financial balance are uncorrelated, an observation that IMF (2017) interprets as indicative of a thickening of a corporate veil. Corporate net lending played a considerable role for current account rebalancing, e.g., in China, Japan, or Spain.

Figure 6 shows that the correlation with the current account balance is stronger for changes in corporate saving than for changes in corporate investment. This observation suggests that move-

ments in corporate saving in particular feed through to the national saving-investment balance, in line with the corporate veil argument.

In the next section, we test the corporate veil hypothesis more formally in a multivariate panel estimation framework.

4 Empirical analysis

4.1 Analytical framework

The current account balance is defined as the difference between domestic saving and domestic investment or equivalently as the sum of the financial balances (income minus expenditure, or saving minus investment) of the private household, the corporate and the government sectors:

$$S - I = CA \tag{2}$$

$$S^{HH} + S^{CORP} + S^{GOV} - I^{HH} - I^{CORP} - I^{GOV} = CA \tag{3}$$

$$FB^{HH} + FB^{CORP} + FB^{GOV} = CA \tag{4}$$

where CA is the current account balance and S, I and FB denote, respectively, saving, investment and the financial balance of the household sector, HH, the corporate sector, $CORP$ and the government sector, GOV.

While Equation 2 provides the basis for estimating current account determinants in the state-of-the art literature, the sectoral accounting perspective inherent in Equations 3 and 4 usually is not made explicit in the literature. For example, the External Balance Assessment (EBA) methodology developed by the IMF uses a refined version of Equation 2 as a starting point for the estimation of current account equations. Combining this with a balance-of-payment constraint, a solvency constraint and a multilateral constraint[2], yields the following reduced form equation for the current account balance (see Phillips et al., 2013):

$$CA = f(X_I, X_S, X_{CA}, X_{CF}, Z, Z^{wo}, \Delta R) \tag{5}$$

[2]The multilateral constraint implies that each country's variable should be measured relative to a GDP-weighted world average of the same variable.

Equation 5 states that the current account is determined by the domestic output gap, Z, and the world output gap, Z^{wo}, changes in foreign exchange reserves ΔR, and a host of saving/consumption shifters, X_S, investment shifters, X_I, export/import shifters, X_{CA}, and capital account shifters, X_{CF}. Saving/consumption shifters include such variables as income per capita, demographics, expected income (shifts in permanent income), social insurance, the budget balance, financial policies, the institutional environment, and net exports of exhaustible resources. Investment shifters include income per capita, expected income/output, governance, financial policies. Export/import shifters include the world commodity price-based terms of trade. Capital account shifters include indicators of global risk aversion, the "exorbitant privilege" that comes with reserve currency status, and capital controls.

While it is recognized in the literature that both the government sector and the broad "institutional environment" affect the current account, corporations, despite being one of the most pervasive institutional features of modern capitalist economies, have not been considered explicitly as a driving force of national saving and investment patterns in Equations 2 and 5. By making use of Equations 3 and 4, we can introduce this sectoral perspective in an explicit fashion and test for both non-Ricardian and corporate veil effects. If households fail to see through the institutional veils of the government and corporate sectors, an increase (decrease) in government saving, S^{GOV}, or corporate saving, S^{CORP}, will be less than fully offset by lower (higher) personal saving, S^{HH}, given all other saving determinants. Hence, in the presence of a "thick" government or corporate veil, changes in the government financial balance, FB^{GOV}, or the corporate financial balance, FB^{CORP}, will feed through to the current account.

Note that most empirical analyses use the government financial balance, rather than government saving and investment separately, as a regressor in current account estimations. The underlying assumption seems to be that government investment crowds out private investment to the same extent as households offset changes in government saving by adjusting personal saving. As a first step, we can thus introduce the corporate financial balance into our current account equations on the same level as the fiscal balance. A positive relation between the corporate financial balance and the current account can be due to difficulties in piercing of the corporate veil. By disaggregating corporate net lending, we can also test whether the corporate sector affects the current account primarily through saving or investment. Including corporate saving in the current account estimations provides a direct test of incomplete piercing of the corporate veil. Ca'Zorzi et al. (2012) suggest to include investment (but not corporate saving) as a regressor because it is a demand variable that is associated with a worsening of the trade balance (unless the Feldstein-Horioka hypothesis strictly applies). Moreover, investment should lead to productivity gains in the future, and hence higher expected wealth, giving rise to an intertemporal adjustment which results in a

current account deficit (see Glick and Rogoff, 1995; Ca'Zorzi et al., 2012). A further rationale for including corporate investment in the current account estimation (either indirectly as a component of the corporate financial balance, or directly as a separate regressor) is that previous studies have found that most variables commonly used in current account estimations appear to mainly operate through the saving channel (Phillips et al., 2013).

4.2 Estimation strategy

The empirical analysis builds on the panel estimation literature on current account determinants, which includes amongst others Chinn and Prasad (2003), Lee et al. (2008), Gruber and Kamin (2007, 2009), Chinn and Ito (2007, 2008), Phillips et al. (2013), and Chinn et al. (2014). The most general version of the regression specification can be written as follows:

$$CA_{i,t} = \beta_0 + FUND_{i,t}\Gamma + FIN_{i,t}\Psi + CYC_{i,t}\Upsilon + POL_{i,t}\Pi + \beta_1 CORP_{i,t} + \varepsilon_{i,t} \tag{6}$$

where $i = 1, \ldots, N$ and $t = 1, \ldots, T$ denote the cross-sectional and time dimensions, respectively. The dependent variable $CA_{i,t}$ is the current account balance in percent of GDP. The choice of explanatory variables largely follows the literature or is dictated by data availability. $FUND_{i,t}$ refers to traditional fundamentals including the net foreign asset (NFA) position, the relative level of output per worker, demographic factors such as the old age dependency ratio and population growth, the financial center status, and risks associated with the institutional and political environment. $FIN_{i,t}$ refers to financial factors such as the reserve currency status and private credit in percent of GDP. $CYC_{i,t}$ refers to cyclical factors including the output gap and the terms of trade gap. $POL_{i,t}$ refers to policy-related factors such as the cyclically-adjusted fiscal balance in percent of GDP, the degree of capital account openness interacted with the level of development, and private credit in percent of GDP as an indirect indicator of policies to contain financial excesses. In addition to these standard explanatory variables that are frequently used in the literature on current account determinants, we include the cyclically-adjusted corporate financial balance as a share of GDP, $CORP_{i,t}$, which in some estimations is further disaggregated into corporate saving (retained profits) and corporate investment, both in percent of GDP. $\varepsilon_{i,t}$ is a residual error term with zero mean.

We work with an unbalanced panel that includes 25 countries for the period 1980-2015. The sample consists largely of advanced economies but also a few emerging economies. The following countries are included in the sample: Australia, Canada, China, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Japan, South Korea, Netherlands, New Zealand,

Norway, Poland, Portugal, Slovenia, South Africa, Spain, Sweden, Switzerland, United Kingdom, and the United States. Variable definitions and data sources are provided in Appendix A.1.

Most of the explanatory variables in the current account regression specification are converted into deviations from a GDP-weighted sample mean.[3] That is, each country's variables are measured relative to a weighted average of other countries' values prevailing at the same time (see Appendix A.2 for details). The cross-sectional demeaning accounts for the fact that a given economy's current account is by nature measured relative to other countries, so that it must be determined by both its own and its trading partners' characteristics.

We estimate a static current account regression model using pooled generalized least squares (GLS) based on a sample of annual observations, following Phillips et al. (2013). The purpose of using annual data rather than non-overlapping multi-year averages is to uncover cyclical sources of current account dynamics. As the current account displays autocorrelation, we implement a panel-wide AR(1) correction.

One concern in the regression specification is the problem of endogeneity due to potential reverse causality. Some of the explanatory variables such as the fiscal balance or the corporate balance are likely to be influenced by current account developments. In order to address the issue of endogeneity more comprehensively, we perform instrumental variables estimations where the fiscal balance and the corporate balance are instrumented with selected variables.[4]

Another concern is an estimation bias that could arise if relevant explanatory variables explaining the cross-sectional variation in the data are not included in the specification but are correlated with other variables. In order to capture unobserved heterogeneity, we add country-specific effects to the current account regression specification. However, as noted by Chinn and Prasad (2003), including country-specific effects removes much of the cross-country variation which is problematic in the context of current account estimations since much of the variation in the data stems in fact from the cross-sectional dimension. Furthermore, Phillips et al. (2013) argue that country-specific effects do not provide an economic explanation of observed current account balances and may reflect the uncaptured effects of sustained distortions on current account balances.

[3]This treatment does not apply to few variables because it is already implicit in their definition (e.g. net foreign assets, terms of trade, own currency's share in world reserves).

[4]The fiscal balance is instrumented with the lagged world fiscal balance, lagged world GDP growth, lagged world output gap, lagged output gap, lagged U.S. corporate credit spread, the polity index, the exchange rate regime, lagged unemployment rate, and the time average of the fiscal balance. The corporate balance is instrumented with the lagged world corporate balance, lagged world GDP growth, lagged world output gap, lagged output gap, lagged U.S. corporate credit spread, lagged stock market capitalization, lagged stock price volatility, and the time average of the corporate balance. The first stage regression also controls for all other explanatory variables in the current account regression.

4.3 Results

4.3.1 Does corporate sector behavior affect the current account?

Table 1 presents the results for different variants of Equation 6, based on pooled GLS estimation. Column 1 shows the results for a baseline model without any corporate sector variables. The set of explanatory variables is similar to that applied in Phillips et al. (2013).[5] We use lagged variables in those cases where simultaneity bias may be expected. Estimated coefficients are mostly statistically significant and have expected signs and plausible magnitudes in line with previous studies (Chinn and Prasad, 2003; Lee et al., 2008; Phillips et al., 2013).

The 0.04 coefficient on initial NFA implies that an increase in NFA of 10 percent of GDP raises the medium-term current account balance by about 0.4 percent of GDP. The sign of the coefficient is theoretically ambiguous, but the positive sign estimated here is consistent with previous findings. The regression includes a (statistically significant) interaction term allowing for a non-linear relationship between the initial net foreign asset position and the current account.[6] Relative output per worker, in interaction with capital openness, is positively related to the current account, a result that may be explained through catching-up effects. An increase in relative output per worker by 10 percentage point leads to a rise in the current account by 0.75 percentage points for countries with an open capital account. In countries with capital controls, relative productivity has virtually no effect on the current account. A higher old-age dependency ratio and higher population growth reduce the current account balance, as can be expected in terms of the life-cycle theory of saving. Financial center status is positively related to the current account balance, as expected. Financial centers are found to have a current account balance about 2.7 percent of GDP higher than the other countries in our sample. Risks associated with the institutional and political environment are not statistically significant determinants of current accounts in our estimation. Reserve currency status is negatively linked to the current account, in line with the standard "exorbitant privilege" argument. For every 10 percent of global reserves held in its own currency, a country experiences a current account deficit which is lower by 0.31 percentage points. By contrast, a higher private credit-to-GDP ratio significantly reduces the current account balance. This result is difficult to interpret theoretically but may reflect either financial liberalization or the failure of policies to prevent financial excesses, which can cause demand booms, cause real appreciation and weaken current accounts. According to our estimates, an increase in relative private credit to GDP

[5] We experimented with other variables used by Phillips et al. (2013) for which data are available, including global capital market conditions or global risk aversion. However, we dropped these variables from our regression model as the coefficients turned out to be statistically insignificant.

[6] Catão and Milesi-Ferretti (2014) suggest that crisis probabilities increase when the net foreign debt is above 60 percent of GDP.

by 10 percentage points is associated with a weaker current account by 0.28 percentage points. The output gap enters significantly with a negative coefficient and reflects cyclical influences on the current account balances. This means that the estimated coefficients on all other variables are measuring their effects for given values of the relative output gap. The interaction term of the terms of trade gap and trade openness is also statistically significant, with the expected positive sign. At the sample mean for trade openness, an increase in the terms of trade relative to trend by one percentage points is associated with an improvement of the current account of about 0.2 percent of GDP. The coefficient on the cyclically-adjusted fiscal balance implies that a percentage point increase in the cyclically-adjusted government budget balance (relative to trading partners) leads to a 0.13 percentage point increase in the current account balance in percent of GDP. This result is in line with non-Ricardian household behavior.

When the cyclically-adjusted corporate financial balance is included in the model as an additional regressor (Column 2), the model fit improves, as indicated by the R-squared and the root mean squared error (RMSE). The estimated coefficient on the corporate financial balance is highly significant, and of positive sign. It implies that a 1 percentage point increase in corporate net lending (relative to trading partners) leads to a 0.13 percentage point increase in the current account. Including only corporate saving in the current account regression (Column 3) leads to the same result. A rise in corporate saving (relative to trading partners) by one percentage point increases the current account by approximately 0.15 percentage points. This result is consistent with incomplete piercing of the corporate veil. It is robust to the inclusion of corporate investment in the regression (Column 5), but corporate investment itself does not have a significant effect on the current account balance when included either alone or together with corporate saving (Columns 4 and 5). In Columns 6 and 7, we estimate the same equations separately for national saving and national investment as the dependent variable. In line with Phillips et al. (2013), we find the majority of the significant variables in the current account regressions appear to operate mainly through the saving channel. Both corporate saving and corporate investment are significant in the regressions for domestic saving and domestic investment. However, corporate saving raises total saving more than it raises total investment, and corporate investment raises total investment more than it raises total saving. These findings are again consistent with the results from the current account regressions and with the corporate veil hypothesis. In Columns 8 and 9, the dependent variable is the household financial balance. The effects of almost all of the explanatory variables have the same size and are similar in magnitude as in the current account regressions, in line with the theoretical focus on the household sector in intertemporal models of the current account. The estimated effects of the corporate sector variables in the household financial balance regressions suggest, however, that the total volumes of national saving and investment partly are beyond the

control of the household sector. Theoretically, when households fully pierce the corporate veil, an increase in corporate saving should be fully offset by opposite changes in household saving, given fundamentals. However, the coefficients on corporate net lending and corporate saving are just -0.2 and -0.15, respectively.

The corporate sector variables included in the pooled regression of Table 1 are not only statistically, but also economically significant. The graphs shown in Figure 7 are based on the estimation results reported in Column 3 of Table 1, where corporate saving is included as an explanatory variable. While the upper panel of Figure 7 shows the overall very good performance of the model, the bottom left graph shows that the corporate saving measure explains 10.5 percent of the otherwise unexplained variation in current account balances. The bottom right graph of Figure 7 shows that the corporate saving variable can explain a considerable part of the otherwise unexplained cross-country variation in current account balances over the long run, and hence contributes to the observed current account imbalances. For example, the corporate saving variable almost fully explains the average residuals of a current account regression without any corporate sector variables for China, Japan, and the United Kingdom. Overall, we conclude that taking account of corporate sector behavior significantly improves our understanding of the current account.[7]

4.3.2 Robustness

Table 2 presents several robustness checks. In Columns 1-2, both the fiscal balance and the corporate sector variables are instrumented, with results qualitatively very similar to those discussed in the previous Subsection. Note that the estimated coefficients on both the fiscal and the corporate financial balance are now larger, compared to the estimations reported in Table 1, and in line with recent estimates for the instrumented cyclically-adjusted fiscal balance obtained by IMF (2018).

In Columns 3-4, country fixed effects are added to the regression models including either the corporate financial balance (Column 3) or corporate saving and investment separately (Column 4) as explanatory variables. While the point estimates of each of the corporate sector variables increase in absolute value, compared with the models from Table 1, Columns 2 and 5, corporate investment now enters with a statistically significant coefficient. We hypothesize that this result is in part due to persistent cross-country differences in the corporate investment-to-GDP ratio, with east-Asian countries in particular being permanent outliers. To investigate this possibility further, and because including country fixed effects has the inconvenience of effectively removing much of the cross-country variation in the data, we also estimate the models for a smaller sample with pooled GLS, excluding only the high-investment surplus economies China and South Korea (Table

[7]Note that the estimation results are robust to using non-financial corporate sector variables.

2, Columns 5-8). Corporate investment now turns out to have a statistically significant effect on the current account.

The estimations reported in Columns 9-10 include net FDI flows as an additional regressor to capture the increasingly important role for global firms as a possible explanation for the link between corporate net lending and the current account. Although tracking the international footprints of global firms in terms of the implications of their foreign portfolio and direct investment strategies (Avdjiev et al., 2018) as well off-shore activities (Alstadsaeter et al., 2018) are a complex issue that can only be (partially) addressed using firm-level micro data, a feasible robustness check in a macro panel framework is to control for net FDI flows in the current account estimations. As can bee seen in Columns 9-10 of Table 2, the estimated coefficients on the corporate sector variables remain virtually unchanged, compared with the models from Columns 2 and 5 in Table 1, even when net FDI flows are added to the models.

4.3.3 Is the corporate veil effect a temporary crisis phenomenon?

We also address the question of whether the corporate veil thickened as a result of the global financial crisis after 2007. This hypothesis is intuitively appealing because individual shareholders may discount the value of profits retained by the corporations of which they are the owners in an environment of uncertain future sales and profit opportunities, higher bankruptcy risk and increased likelihood of a stock market downturn. As a result, shareholders' consumption may be less sensitive to corporate retained profits in times of crisis than in normal times, when shareholders have a clearer perception of their permanent income which in part stems from claims on corporate saving.

The results reported in Table 3 do not support such a hypothesis, however. In Columns 1-4, the current account models including the corporate sector variables are estimated for the period 1980-2007. If anything, the effects of corporate net lending and corporate saving on the current account are stronger for the pre-crisis sample than for the full sample (Columns 2-5 of Table 1).

Similarly, when the corporate sector variables are interacted with two different crisis dummies in estimations over the full sample period, the estimated coefficients on these interaction terms are quantitatively negligible and statistically insignificant. In Columns 5-6 of Table 3, we include a dummy variable for the global financial crisis, which takes a value of one for the years 2008-2012, in the regression model. Focusing on this particular crisis is warranted by the particular depth of the Great Recession and its global repercussions. In Columns 7-8, we use a dummy variable for country-specific systemic banking crises, based on Laeven and Valencia (2018). Including this banking crisis dummy provides a more general test of a crisis-induced thickening of the corporate veil. However, the results of the different specifications shown in Table 3 suggest that the current

account effects of the corporate sector cannot be explained as a temporary crisis phenomenon.

4.3.4 Is the corporate saving effect due to income inequality?

Finally, we can use our current account estimations for clarifying the relationship between corporate saving and household income inequality. Dao and Maggi (2018) argue that the observed positive link between corporate saving and the current account should not be surprising since higher corporate saving reinforced rising wealth inequality and hence did not give rise to proportionately higher aggregate household consumption. However, as can be seen in Figure 8, the cross-country correlation of changes in corporate saving and changes in top-end personal income inequality is actually negative in our sample. Moreover, changes in the top 1% household income share are negatively correlated with changes in national current account balances, in contrast with the positive correlation between changes in corporate saving and changes in current account balances (see Figures 8 and 6).

In Table 4, we show estimation models including both the corporate sector variables and different measures of personal income inequality. While the corporate veil effects are robust to this extension of the model, household income inequality is found to have a consistently negative effect on the current account. Although this result may seem counterintuitive, it is consistent with empirical evidence pointing at a negative effect of (top-end) income inequality on household and national saving ("trickle-down consumption"). Bertrand and Morse (2016), for example, based on 1980-2008 expenditure data from the Consumer Expenditure Survey (CEX), show that non-rich households in the United States consumed a larger share of their current income when exposed to higher top income and consumption levels. Theoretically, this finding is consistent with consumption externalities arising from a status-maintaining motive by middle and lower class households (see also Frank, 2007; Heffetz, 2011; Frank et al., 2014; Agarwal et al., 2018). Bertrand and Morse (2016) conclude that the U.S. personal saving rate in 2005, which was 1.5%, would have been between 3.5% and 3.9% if top income levels had grown at the same rate as the median income since the 1980s. Kumhof et al. (2012) and Behringer and van Treeck (2018) obtain similar results in macro panel estimation analyses of current account balances.

How is the finding of a negative current account effect of household inequality to be squared with the positive effect of corporate saving? Although the present analysis does not allow any definite conclusions, a potential explanation follows directly from the combined notions of trickle-down consumption and corporate veil: Trickle-down consumption effects are triggered by higher spending by high-income households on positional goods, to which lower-income households react by trading off (non-positional) saving for (positional) consumption. Without a corporate veil, an increase in corporate saving should have the same consumption and saving effects as an increase

in top household incomes. However, in the presence of a corporate veil, trickle-down consumption effects will be smaller in countries where corporate saving increases more strongly, but where top-end household income inequality increases less strongly. As Figure 8 suggests, changes in corporate saving and top household income shares tend to be inversely related across countries, since a high level of retained corporate sector profits in surplus countries such as Germany, Japan, the Netherlands, or South Korea implies a lower level of top executive incomes and dividend income in the household sector. Conversely, higher distributed profits and top management pay in such deficit countries as the United Kingdom or the United States imply lower corporate retained earnings.

5 Concluding remarks

Recent academic and policy-oriented debates have highlighted the importance of corporate sector behavior as a driving force of macroeconomic trends (Karabarbounis and Neiman, 2014; Gruber and Kamin, 2016; Chen et al., 2017; IMF, 2017; Dao and Maggi, 2018). This emerging strand in the literature constitutes a departure from the long dominant individualistic foundations of theoretical and empirical macroeconomics. The present paper contributes to these debates by analyzing the role of the corporate sector in global current account imbalances. While the intertemporal approach to the current account that has dominated the literature since the seminal contribution by Obstfeld and Rogoff (1995) highlights the importance of individual optimizing behavior for national saving-investment balances, our paper adds to the increasing recognition of the non-household sectors as shaping macroeconomic dynamics beyond the control of decisions made in the household sector.[8] While the existing empirical literature has routinely tested for non-Ricardian household behavior by including the fiscal balance as an explanatory variable in current account regressions, we have argued in this paper that corporate sector behavior ought to take center stage in the analysis of global current account imbalances.

The most significant and robust result of the present paper is that changes in corporate saving have statistically and economically significant explanatory power for the understanding of national current account dynamics. This finding is robust to controlling for country-specific effects, FDI flows, temporary crisis effects, and personal income inequality. At a theoretical basis, it is consistent with incomplete piercing of the corporate veil.

The recent convergence of the macroeconomics literature and the literature on income and wealth inequality in terms of the implications of corporate sector trends for both aggregate de-

[8]The focus on economic sectors as driving forces of macroeconomic outcomes has a long tradition in "structuralist" approaches to macroeconomics (see, for example, Godley and Lavoie, 2007).

mand dynamics and distributional dynamics (e.g. Zucman, 2014; Piketty et al., 2017; Autor et al., 2017) entails promising avenues for future research. On the one hand, as our empirical analysis shows, the current account effects of changes in distribution may differ considerably across countries depending on the extent to which they affect either personal income inequality or corporate saving and wealth inequality. On the other hand, the growing prevalence of globally operating firms poses important challenges to conventional analyses of both income and wealth inequality measures and current account determinants. National current account balances are increasingly driven by the decisions of multinational firms in a context of global value chains and international tax optimization strategies, which interfere with intertemporal saving decisions by domestic households (e.g. Avdjiev et al., 2018). While the present paper has highlighted the importance of corporate sector behavior in a macro panel estimation framework, an important task for future research is to analyze the macroeconomic implications of corporate sector behavior using firm-level micro data.

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A Description of data

A.1 Variable definitions and data sources

Current account balance: The current account balance is defined as the sum of net exports of goods and services, net primary income, and net secondary income as percent of GDP. Data for the current account balance are taken from the World Economic Outlook (WEO) database (October 2018 version) provided by the International Monetary Fund (IMF).

Total investment: Gross capital formation is measured by the total value of gross fixed capital formation and changes in inventories and acquisitions less disposals of valuables as percent of GDP. Total saving is defined as the sum of the current account balance as percent of GDP and gross capital formation as percent of GDP. Data are taken from the World Economic Outlook (WEO) database (October 2018 version).

Household balance: The household financial balance is defined as gross saving minus gross capital formation and other capital expenditures as percent of GDP. Our primary source is the AMECO database (May 2018 version) of the European Commission. For China, Korea, New Zealand and South Africa, we use data from the national accounts statistics provided by the Eurostat database. For Australia and Canada, we employ data from national statistical sources.

Net foreign assets: Net foreign assets are measured as total assets minus total liabilities as percent of GDP. In order to capture possible nonlinearities in the relationship between the current account and the net foreign asset position, we include an interaction term to allow for a different slope when the net foreign asset position is below negative 60 percent of GDP. Data are taken from the updated and extended version of the External Wealth of Nations Mark II database developed by Lane and Milesi-Ferretti (2007).

Financial center status: We follow the External Balance Assessment (EBA) Methodology developed by Phillips et al. (2013) and include a dummy variable that equals one for small countries that are considered as financial centers. In our regression sample these countries are the Netherlands and Switzerland.

Output per worker, relative to top 3 economies: To measure a country's relative stage of economic development, we take the ratio of PPP converted GDP to working age population relative to the average productivity of three large economies (Germany, Japan, and the United States). We

use GDP at PPPs in international dollars from the World Economic Outlook (WEO) database (October 2018 version). Data on working age population are taken from the 2017 Revision of World Population Prospects provided by the United Nations. Relative output per worker is also interacted with an indicator for capital account openness. The degree of a country's capital account openness is measured by the capital controls index developed by Quinn (1997) and Quinn and Toyoda (2008). This index measures the magnitude of capital account liberalization and is scaled between 0 (no capital controls) and 1 (full capital controls).

Demographics: Demographic developments are proxied by the old-age dependency ratio, which is constructed as the ratio of the population older than 65 years to the population between 30 and 64, and population growth. Data are taken from the 2017 Revision of World Population Prospects.

Reserve currency status: We use the share of a country's own currency in the total stock of world reserves as a proxy for the so-called "exorbitant privilege" of reserve currency countries. Data are taken from the Currency Composition of Official Foreign Exchange Reserves (COFER) database by the IMF.

Output gap: The output gap is measured by the Hodrick-Prescott filter. This procedure removes the cyclical component from the long-term trend GDP. The HP filtered estimates of the output gap are based on data over 1980-2013, using projections for 2018-2023. Data are in constant national currency and taken from the World Economic Outlook (WEO) database (October 2018 version).

Terms of trade gap: The terms of trade are defined as the ratio between the index of export prices and the index of import prices. The terms of trade gap is then measured by the Hodrick-Prescott filter based on data over the period 1970-2016. We employ data from the national accounts statistics provided by the OECD. For China, we use data from the World Development Indicators (WDI) database (October 2018 version) by the World Bank. The resulting terms of trade gap series is then interacted with an indicator of a countryâs trade openness. Trade openness is measured as the sum of exports and imports of goods and services as percent of GDP. Data are taken from the World Development Indicators (WDI) database (October 2018 version).

Institutional and political environment: In our regressions, we use a measure of the degree of safety (or risk) associated with the institutional and political environment. This measure is a summary index of five indicators: socioeconomic conditions, investment profile, corruption, religious tensions and democratic accountability. Each indicator is scaled between 0 and 1 and the summary

index is a simple average of the five sub-indices. A safer (*i.e.* less risky) institutional and political environment is assigned higher ratings. Data are taken from the EBA dataset.

Private credit: We use private credit by deposit money banks and other financial institutions as percent of GDP as a proxy for both "financial excesses" and financial development. The variable measures the deviation form a country's current level of credit provided to households and non-financial corporations from its own historical average. Data are taken from the Global Financial Development Database (GFDD) from the World Bank (July 2018 version). For Canada and New Zealand, data are only available until 2008 and 2010. For the remaining period until 2015 we use the latest available observation.

Cyclically-adjusted fiscal balance: The fiscal balance is defined as total general government revenue minus total general government expenditures as percent of GDP. The cyclically-adjusted fiscal balance is computed as the residual of a regression of the fiscal balance on the output gap. We employ several sources for the fiscal balance. Our primary source is the AMECO database (May 2018 version) of the European Commission. As the Eurostat database and the OECD database provide longer series for certain countries we complement the AMECO series with data from these alternative sources. For China, Korea, New Zealand and South Africa, we use series from the Eurostat database. For Belgium, Denmark, Italy, Netherlands, Norway, Sweden, Switzerland and the United Kingdom, we employ data from the OECD database. For Australia and Canada, we employ data from national statistical sources.

Cyclically-adjusted corporate balance: The corporate financial balance is defined as gross saving minus gross capital formation and other capital expenditures as percent of GDP. The cyclically-adjusted corporate balance is computed as the residual of a regression of the corporate balance on the output gap. We employ several sources for the corporate balance. Our primary source is the AMECO database (May 2018 version) of the European Commission. For China, Korea, New Zealand and South Africa, we use data from the national accounts statistics provided by the Eurostat database. For Australia and Canada, we employ data from national statistical sources.

Corporate saving and investment: Gross saving of the corporate sector is defined as disposable income minus adjustments for the change in net equity of households in pension funds reserves as percent of GDP. Gross capital formation of the corporate sector consists of gross fixed capital formation, changes in inventories and acquisitions less disposals of valuables as percent of GDP. Our primary source is the AMECO database (May 2018 version) of the European Commission.

For China, Korea, New Zealand and South Africa, we use data from the national accounts statistics provided by the Eurostat database. For Australia and Canada, we employ data from national statistical sources.

Foreign direct investment: We use net foreign direct investment flows as percent of GDP as a proxy of the corporate sector globalization process. Net foreign direct investment flows are defined as outward flows of foreign direct investment minus inward flows of foreign direct investment as percent of GDP. Data are taken from the United Nations Conference on Trade and Development (UNCTAD).

Economic crises: In order to examine whether the current account effects of corporate sector behavior are different during economic crises we add interaction terms between corporate sector variables and a variable for economic crises. For this purpose, we use a dummy variable for the global financial crisis that equals one over the period 2008-2012 for all countries in the sample. Alternatively, we use a dummy variable for banking crisis taken from the global database on systemic banking crises by Laeven and Valencia (2018). Our sample of 25 countries over the period 1980-2015 includes 26 banking crises episodes.

Top income shares: We use different fiscal income top income share series from the World Inequality Database (WID) as proxies for income inequality. These data are collected from personal income tax returns following the methodology outlined in Piketty (2003) and Piketty and Saez (2003). For Ireland, data on top 5% income shares are not available. We therefore use the mean of the top 1% income share and the top 10% income share.

Gini coefficient: As an alternative measure of income inequality we use the Gini coefficient of equivalized market household income (i.e. after taxes and transfers) of the Standardized Income Inequality Database (SWIID, version 7.1). For a detailed description of the dataset, see Solt (2016).

A.2 Demeaning of explanatory variables

Since national current account balances are influenced both by domestic and foreign economic conditions, most explanatory variables are converted into deviations from a weighted sample mean. The sample mean is calculated across all countries for which data are available for a given

time period. Country-specific weighted averages of foreign variables are then constructed as follows:

$$\widetilde{X}_{it} = X_{it} - \frac{\sum_{i=1}^{J} (W_{it} * X_{it})}{\sum_{i=1}^{J} W_{it}} \tag{7}$$

where X_{it} denotes the observation of the respective explanatory variable for country i and time period t, and W_{it} stands for the weighting variable. For country-specific GDP weights we use data from the World Economic Outlook (WEO) database (October 2018 version) provided by the International Monetary Fund (IMF).

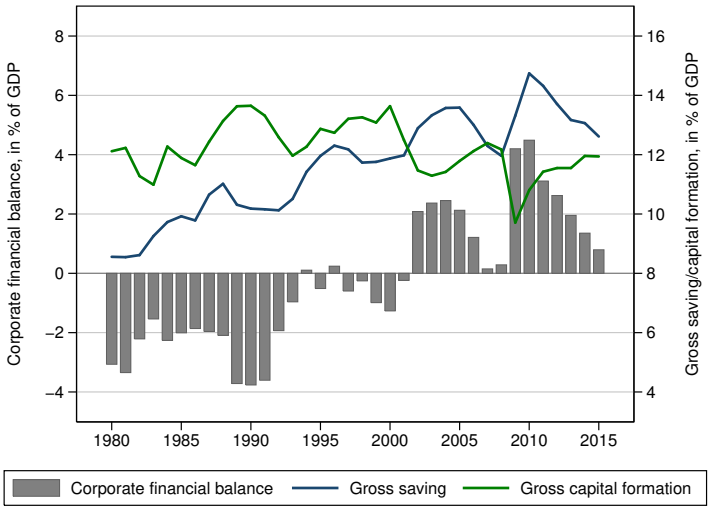


Figure 1: Gross saving, capital formation and financial balance, corporate sector, G7, 1980-2015

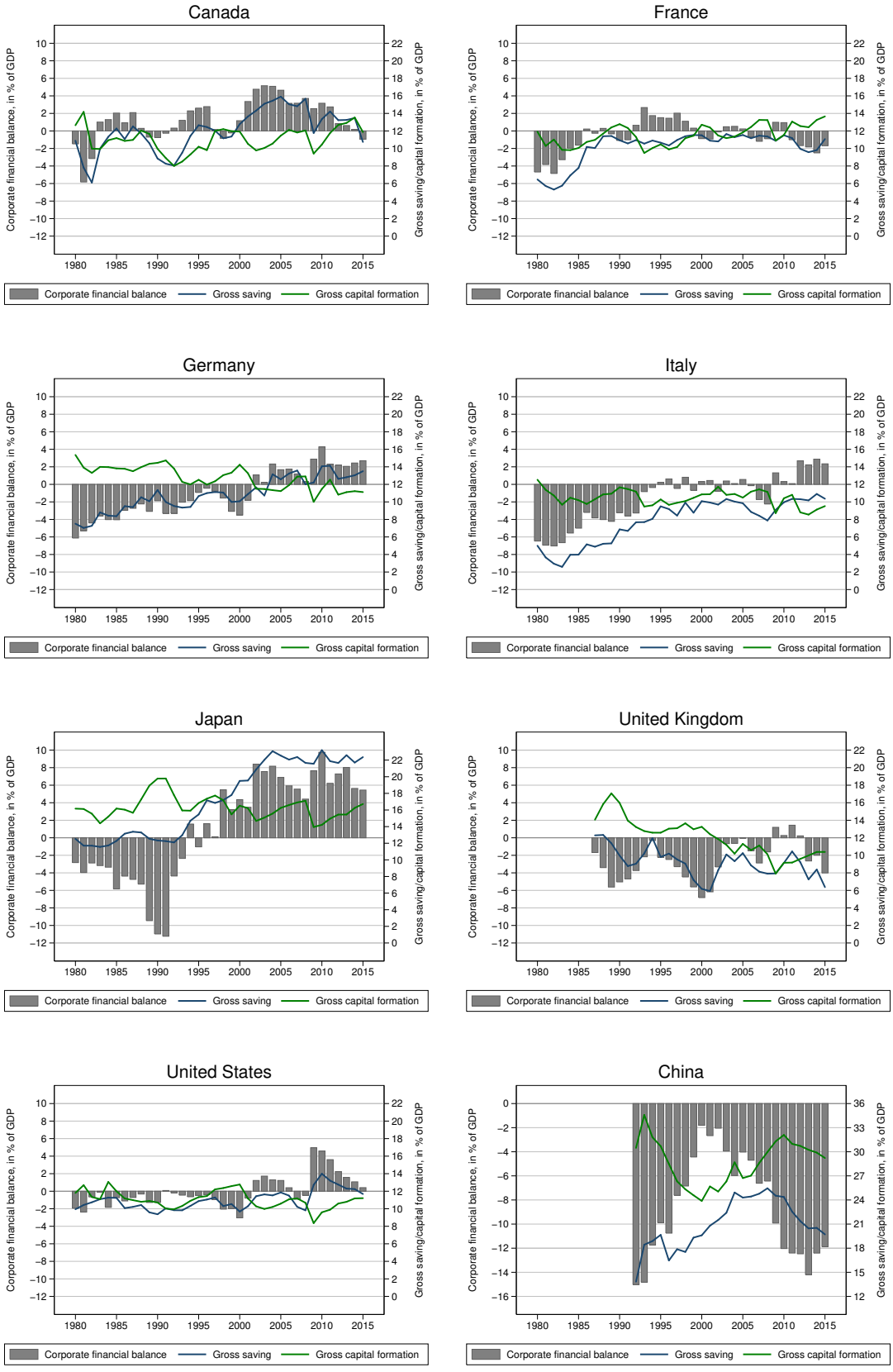


Figure 2: Gross saving, capital formation and financial balance, corporate sector, G7 and China, 1980-2015

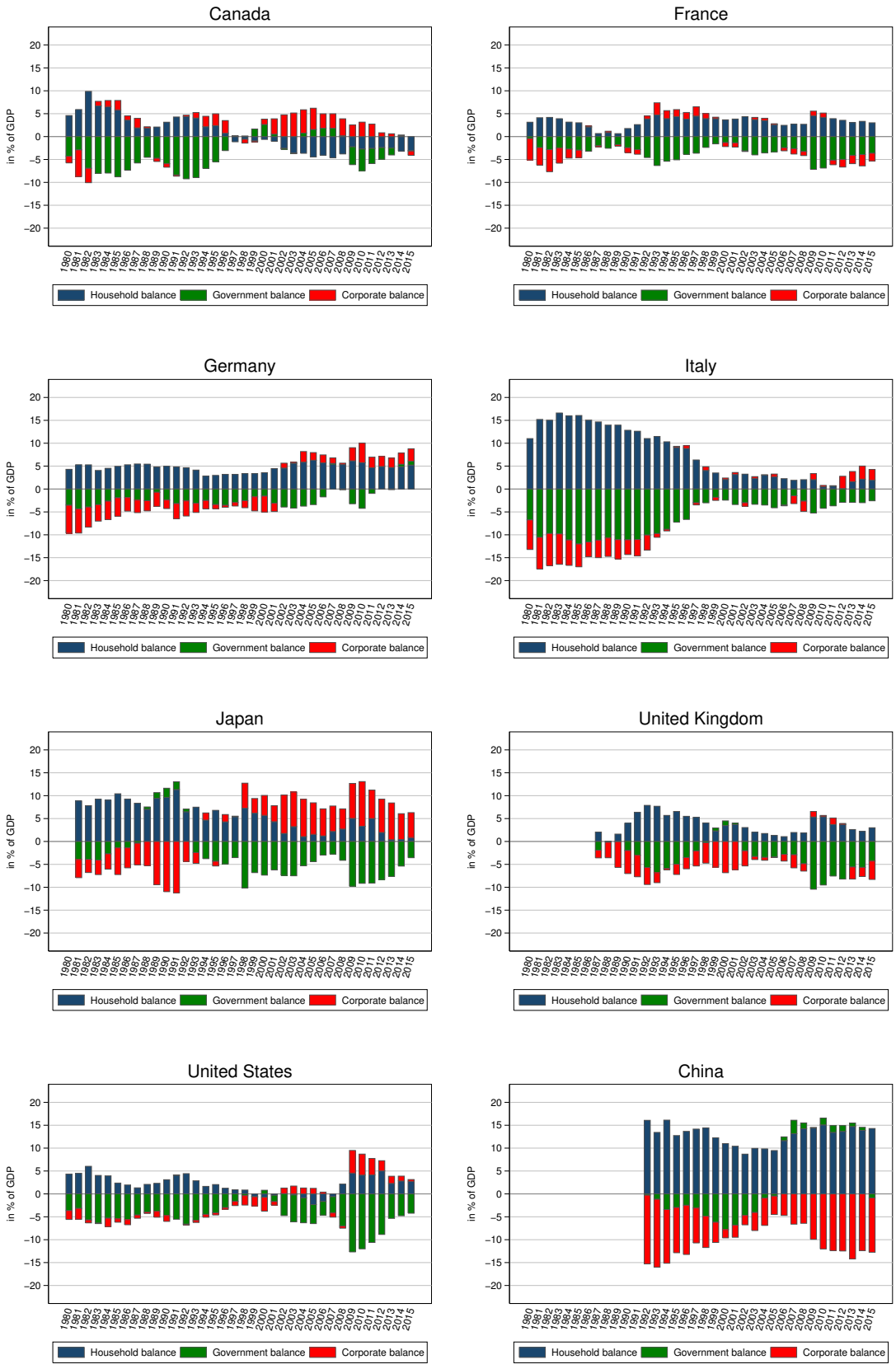
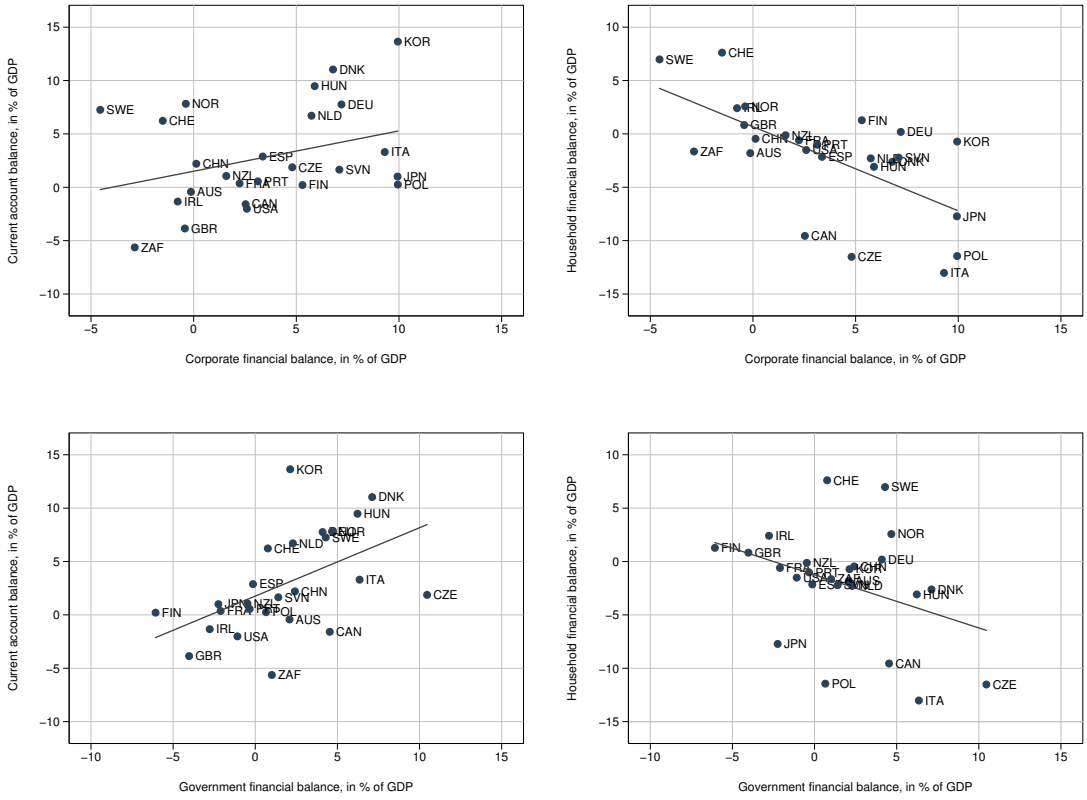
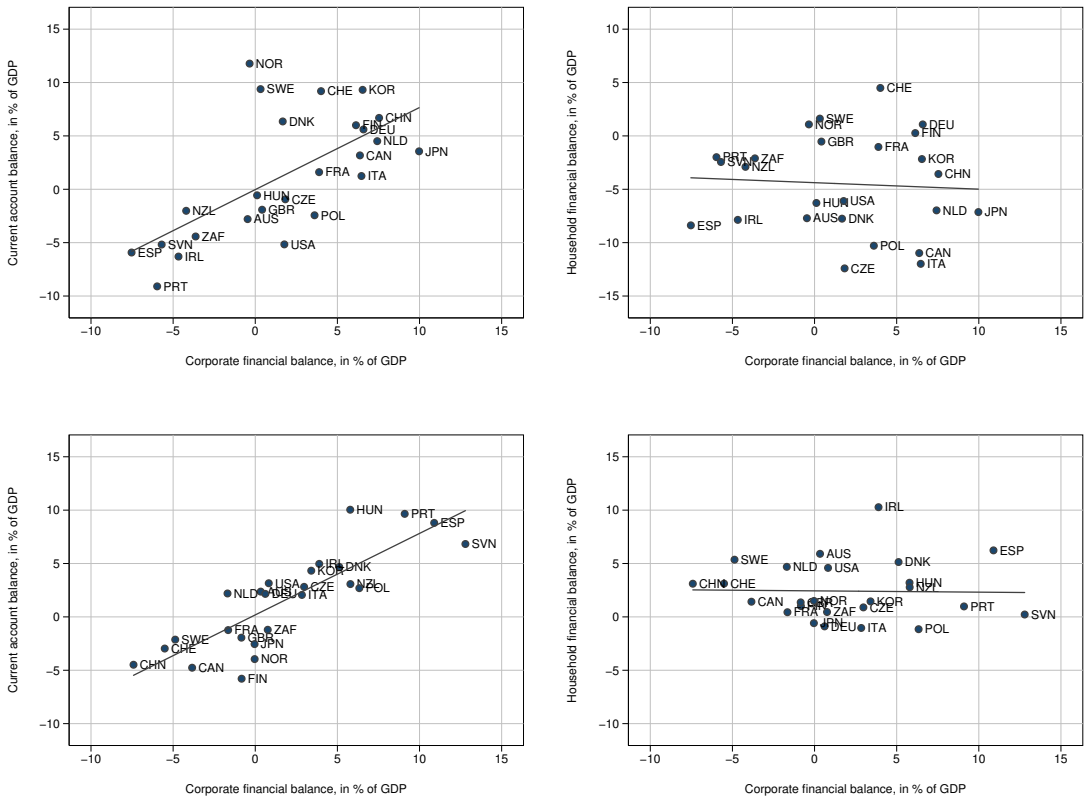


Figure 3: Sectoral financial balances, G7 and China, 1980-2015



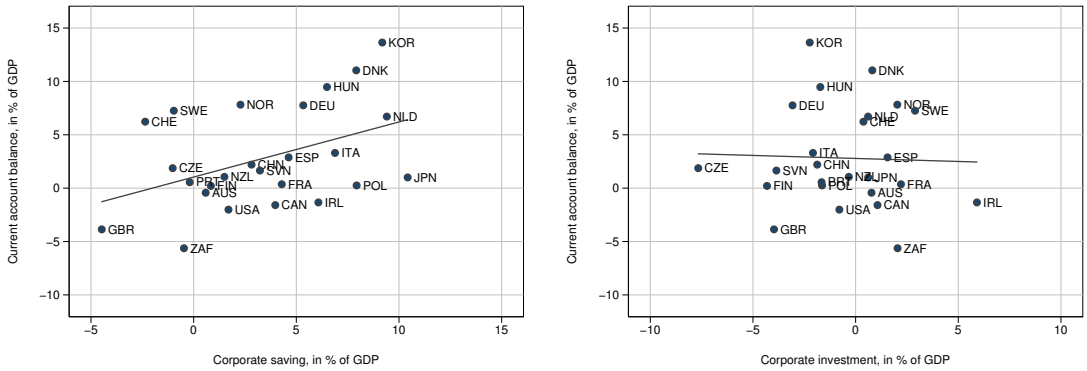
Note: The figure shows the change in, respectively, the government financial balance and the corporate financial balance in % of GDP (horizontal axis) against the change in, respectively, the current account balance in % of GDP and the private household financial balance in % of GDP (vertical axis). Changes are calculated for the period 1980/83-2012/15 or for the longest available time span within this period.

Figure 4: Sectoral financial balances and current account balances, 1980-2015



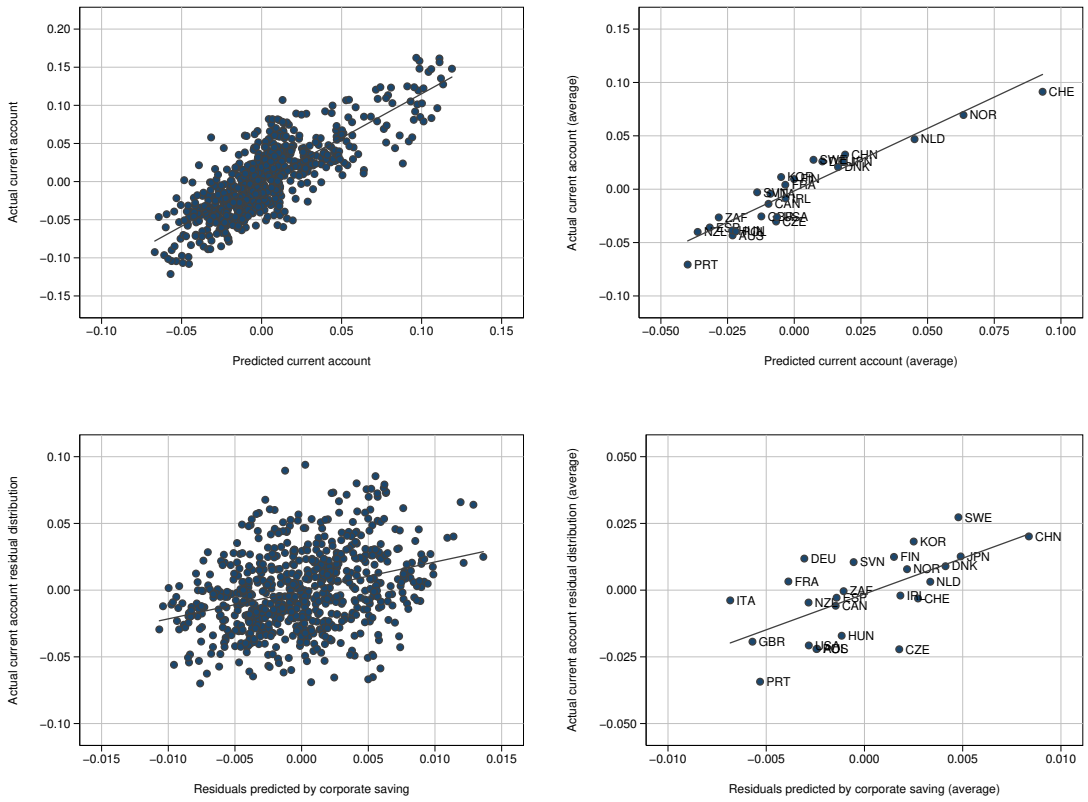
Note: The figure shows the change in the corporate financial balance in % of GDP (horizontal axis) against the change in, respectively, the current account balance in % of GDP and the private household financial balance in % of GDP (vertical axis). In the upper (lower) panel of the figure, changes are calculated for the period 1980/83-2004/07 (2004/07-2012/15) or for the longest time span within this period.

Figure 5: Corporate financial balances and current account balances, pre- and post-crisis periods



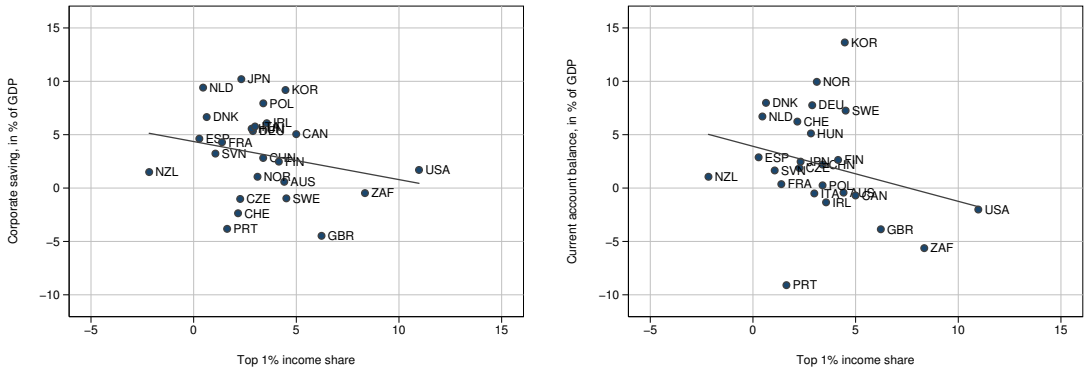
Note: The figure shows the change in, respectively, corporate saving in % of GDP and corporate investment in % of GDP (horizontal axis) against the change in the current account balance in % of GDP. Changes are calculated for the period 1980/83-2012/15 or for the longest time span within this period.

Figure 6: Corporate saving, corporate investment, and current account balances, 1980-2015



Note: In the bottom-left graph, the vertical axis measures the actual current account residuals from the baseline model without any corporate sector variables reported in Table 1, Column 1. The horizontal axis shows the current account levels predicted by regressing current account residuals (from the baseline model without any corporate sector variables) on the corporate saving variable. The bottom-right graph shows the respective country-specific time averages.

Figure 7: Role of corporate saving: predicted and actual current account residuals



Note: The figure shows the change in the top 1% household income share (horizontal axis) against, respectively, the change in corporate saving in % of GDP and the current account balance in % of GDP. Changes are calculated for the period 1980/83-2012/15 or for the longest time span within this period.

Figure 8: Top household income shares, corporate saving, and current account balances, 1980-2015

Table 1: Current account regression model

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Regressor	CA	CA	CA	CA	CA	SAV	INV	FB^{HH}	FB^{HH}
L.Net foreign assets (% of GDP)	0.037***	0.040***	0.035***	0.038***	0.039***	0.052***	0.011**	0.025***	0.023***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.005)	(0.006)	(0.006)
L.NFA/Y*(Dummy if NFA/Y < -60%)	-0.056***	-0.061***	-0.055***	-0.058***	-0.059***	-0.066***	0.000	-0.028**	-0.027*
	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.014)	(0.012)	(0.013)	(0.014)
L.Output per worker (relative to top 3 economies)	-0.001	-0.017	-0.000	-0.003	-0.008	-0.015	0.015	-0.079***	-0.078***
	(0.022)	(0.020)	(0.021)	(0.022)	(0.021)	(0.027)	(0.021)	(0.022)	(0.021)
L.Relative output per worker*Capital openness	0.075***	0.084***	0.070**	0.077***	0.077***	0.065**	-0.033	0.096***	0.087***
	(0.028)	(0.026)	(0.027)	(0.028)	(0.026)	(0.033)	(0.026)	(0.027)	(0.026)
Dependency ratio	-0.078*	-0.079*	-0.060	-0.081*	-0.070*	-0.185***	-0.089***	-0.037	-0.011
	(0.046)	(0.042)	(0.044)	(0.045)	(0.041)	(0.047)	(0.033)	(0.045)	(0.045)
Population growth	-1.765***	-1.783***	-1.569***	-1.805***	-1.649***	-1.481***	0.293	-1.535***	-1.419***
	(0.532)	(0.483)	(0.517)	(0.518)	(0.482)	(0.515)	(0.374)	(0.497)	(0.509)
Financial center status	0.027***	0.023**	0.025**	0.026***	0.022**	0.011	-0.009*	0.021***	0.023***
	(0.011)	(0.009)	(0.010)	(0.010)	(0.009)	(0.010)	(0.005)	(0.007)	(0.007)
Institutional/political environment	-0.032	-0.034	-0.030	-0.031	-0.029	-0.076***	-0.054***	-0.060***	-0.061***
	(0.023)	(0.022)	(0.022)	(0.023)	(0.022)	(0.024)	(0.019)	(0.023)	(0.023)
Reserve currency status	-0.031***	-0.028***	-0.025**	-0.031***	-0.026**	-0.028**	0.014*	-0.012	-0.003
	(0.012)	(0.010)	(0.011)	(0.011)	(0.011)	(0.011)	(0.008)	(0.011)	(0.012)
Private credit (% of GDP)	-0.028***	-0.026***	-0.025***	-0.028***	-0.024***	-0.029***	-0.001	0.010	0.009
	(0.008)	(0.007)	(0.008)	(0.008)	(0.007)	(0.008)	(0.006)	(0.007)	(0.008)
Output gap	-0.314***	-0.317***	-0.332***	-0.315***	-0.325***	0.139***	0.406***	-0.219***	-0.252***
	(0.053)	(0.053)	(0.053)	(0.054)	(0.055)	(0.052)	(0.049)	(0.050)	(0.052)
Terms of trade gap*Trade openness	0.306***	0.305***	0.309***	0.306***	0.310***	0.250***	-0.050	0.041	0.036
	(0.040)	(0.040)	(0.040)	(0.040)	(0.041)	(0.035)	(0.038)	(0.036)	(0.037)
L.Cyclically-adjusted fiscal balance (% of GDP)	0.133***	0.221***	0.143***	0.141***	0.163***	0.268***	0.120***	-0.168***	-0.083**
	(0.036)	(0.040)	(0.036)	(0.036)	(0.037)	(0.034)	(0.032)	(0.038)	(0.036)
L.Cyclically-adjusted corporate balance (% of GDP)	-	0.125***	-	-	-	-	-	-0.199***	-
		(0.039)						(0.037)	
L.Corporate saving (% of GDP)	-	-	0.154***	-	0.186***	0.240***	0.073*	-	-0.149***
			(0.048)		(0.049)	(0.051)	(0.038)		(0.045)
L.Corporate investment (% of GDP)	-	-	-	-0.006	-0.070	0.447***	0.722***	-	0.244***
				(0.050)	(0.051)	(0.057)	(0.049)		(0.048)
Observations	706	706	706	706	706	706	706	706	706
Countries	25	25	25	25	25	25	25	25	25
R-squared	0.616	0.667	0.648	0.620	0.667	0.759	0.775	0.526	0.489
RMSE	0.029	0.028	0.028	0.029	0.028	0.036	0.026	0.032	0.033

*Note: CA is the current account balance in % of GDP, SAV is total saving in % of GDP, INV is total investment in % of GDP, FB^{HH} is the household financial balance in % of GDP. All regressions are estimated by pooled GLS with a panel-wide AR(1) correction. Heteroskedasticity robust standard errors are reported in parentheses. All estimations include a constant term. L. denotes one year lag. *, **, and *** denotes significance at* 10%, 5%, *and* 1% *levels, respectively. See Appendix A for a detailed description of the data.*

Table 2: Current account regression model: Robustness

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Regressor	*CA*	*CA*	*CA*	*CA*	*CA*	*CA*	*CA*	*CA*	*CA*	*CA*
L.Net foreign assets (% of GDP)	0.029***	0.029***	0.036***	0.037***	0.036***	0.030***	0.036***	0.037***	0.040***	0.038***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.007)	(0.008)	(0.007)	(0.007)	(0.007)	(0.007)
L.NFA/Y*(Dummy if NFA/Y < -60%)	-0.040***	-0.045***	-0.075***	-0.073***	-0.060***	-0.051***	-0.058***	-0.060***	-0.061***	-0.059***
	(0.015)	(0.015)	(0.015)	(0.015)	(0.014)	(0.015)	(0.015)	(0.014)	(0.014)	(0.014)
L.Output per worker (relative to top 3 economies)	-0.046**	-0.029	0.016	0.030	-0.013	-0.006	0.004	-0.007	-0.022	-0.012
	(0.023)	(0.025)	(0.032)	(0.033)	(0.029)	(0.031)	(0.030)	(0.029)	(0.020)	(0.020)
L.Relative output per worker*Capital openness	0.091***	0.081***	0.038	0.039	0.082**	0.079**	0.072**	0.079**	0.090***	0.082***
	(0.029)	(0.030)	(0.029)	(0.030)	(0.035)	(0.037)	(0.036)	(0.035)	(0.025)	(0.026)
Dependency ratio	-0.035	-0.025	-0.131***	-0.146***	-0.009	0.002	-0.023	-0.017	-0.095**	-0.086**
	(0.048)	(0.047)	(0.043)	(0.043)	(0.039)	(0.044)	(0.043)	(0.040)	(0.041)	(0.041)
Population growth	-1.492***	-1.123**	-0.881	-0.773	-1.438***	-1.256**	-1.537***	-1.428***	-1.900***	-1.755***
	(0.534)	(0.543)	(0.573)	(0.582)	(0.465)	(0.530)	(0.502)	(0.464)	(0.472)	(0.478)
Financial center status	0.028**	0.023**	0.051**	0.041***	0.026***	0.031***	0.029***	0.024***	0.018**	0.018**
	(0.012)	(0.012)	(0.020)	(0.011)	(0.009)	(0.011)	(0.010)	(0.009)	(0.009)	(0.009)
Institutional/political environment	-0.054**	-0.045*	0.014	0.013	-0.031	-0.034	-0.029	-0.030	-0.035	-0.031
	(0.024)	(0.024)	(0.023)	(0.024)	(0.022)	(0.023)	(0.023)	(0.022)	(0.021)	(0.022)
Reserve currency status	-0.014	-0.012	0.022	0.025	-0.027***	-0.025**	-0.034***	-0.031***	-0.029***	-0.027**
	(0.012)	(0.012)	(0.019)	(0.019)	(0.010)	(0.012)	(0.011)	(0.010)	(0.010)	(0.010)
Private credit (% of GDP)	-0.020**	-0.017**	-0.028***	-0.027***	-0.026***	-0.026***	-0.028***	-0.024***	-0.028***	-0.026***
	(0.008)	(0.008)	(0.007)	(0.007)	(0.007)	(0.008)	(0.008)	(0.007)	(0.007)	(0.007)
Output gap	-0.236***	-0.162**	-0.380***	-0.334***	-0.272***	-0.268***	-0.239***	-0.252***	-0.320***	-0.326***
	(0.066)	(0.078)	(0.053)	(0.056)	(0.052)	(0.052)	(0.053)	(0.054)	(0.053)	(0.055)
Terms of trade gap*Trade openness	0.182***	0.199***	0.282***	0.288***	0.305***	0.311***	0.309***	0.313***	0.313***	0.317***
	(0.045)	(0.046)	(0.042)	(0.041)	(0.041)	(0.040)	(0.040)	(0.041)	(0.040)	(0.040)
L.Cyclically-adjusted fiscal balance (% of GDP)	0.509***	0.332***	0.222***	0.141***	0.224***	0.137***	0.144***	0.167***	0.222***	0.160***
	(0.103)	(0.106)	(0.045)	(0.039)	(0.040)	(0.036)	(0.036)	(0.037)	(0.040)	(0.037)
L.Cyclically-adjusted corporate balance (% of GDP)	0.385***	-	0.185***	-	0.143***	-	-	-	0.129***	-
	(0.089)		(0.043)		(0.040)				(0.039)	
L.Corporate saving (% of GDP)	-	0.496***	-	0.161***	-	0.110**	-	0.168***	-	0.184***
		(0.091)		(0.057)		(0.051)		(0.049)		(0.048)
L.Corporate investment (% of GDP)	-	-0.300***	-	-0.288***	-	-	-0.133**	-0.190***	-	-0.070
		(0.105)		(0.059)			(0.055)	(0.056)		(0.051)
Net FDI flows (% of GDP)	-	-	-	-	-	-	-	-	0.167**	0.163**
									(0.068)	(0.069)
Observations	704	704	706	706	648	648	648	648	706	706
Countries	25	25	25	25	23	23	23	23	25	25
R-squared	0.621	0.632	0.771	0.782	0.639	0.619	0.567	0.628	0.686	0.684
RMSE	0.029	0.029	0.023	0.022	0.028	0.029	0.031	0.029	0.027	0.027

*Note: CA is the current account balance in % of GDP. All regressions are estimated by pooled GLS with a panel-wide AR(1) correction. Heteroskedasticity robust standard errors are reported in parentheses. In Models (1) and (2), the cyclically-adjusted fiscal balance and the corporate sector variables are instrumented. The Models (3) and (4) include country fixed effects. All estimations include a constant term. L. denotes one year lag. *, **, and *** denotes significance at* 10%, 5%, *and* 1% *levels, respectively. See Appendix A for a detailed description of the data.*

Table 3: Current account regression model: Pre-crisis sample and financial crisis dummy

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Regressor	*CA*	*CA*	*CA*	*CA*	*CA*	*CA*	*CA*	*CA*
L.Net foreign assets (% of GDP)	0.051***	0.044***	0.048***	0.049***	0.040***	0.039***	0.040***	0.039***
	(0.007)	(0.008)	(0.008)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
L.NFA/Y*(Dummy if NFA/Y < -60%)	-0.078***	-0.071***	-0.075***	-0.080***	-0.061***	-0.058***	-0.061***	-0.059***
	(0.018)	(0.018)	(0.019)	(0.018)	(0.015)	(0.015)	(0.015)	(0.015)
L.Output per worker (relative to top 3 economies)	-0.026	0.000	-0.009	-0.012	-0.019	-0.011	-0.019	-0.010
	(0.021)	(0.023)	(0.023)	(0.022)	(0.020)	(0.021)	(0.021)	(0.021)
L.Relative output per worker*Capital openness	0.109***	0.091***	0.105***	0.099***	0.087***	0.081***	0.085***	0.079***
	(0.026)	(0.029)	(0.028)	(0.027)	(0.026)	(0.026)	(0.026)	(0.026)
Dependency ratio	-0.133***	-0.128**	-0.136***	-0.132***	-0.082*	-0.072*	-0.076*	-0.069*
	(0.048)	(0.054)	(0.051)	(0.048)	(0.042)	(0.041)	(0.042)	(0.041)
Population growth	-1.954***	-1.881***	-1.971***	-1.912***	-1.798***	-1.687***	-1.793***	-1.654***
	(0.470)	(0.524)	(0.500)	(0.466)	(0.481)	(0.478)	(0.482)	(0.479)
Financial center status	0.010	0.014	0.015*	0.009	0.022**	0.022**	0.023**	0.022**
	(0.008)	(0.009)	(0.008)	(0.008)	(0.009)	(0.009)	(0.009)	(0.009)
Institutional/political environment	-0.028	-0.028	-0.025	-0.024	-0.034	-0.029	-0.033	-0.029
	(0.023)	(0.024)	(0.024)	(0.023)	(0.022)	(0.022)	(0.022)	(0.022)
Reserve currency status	-0.033***	-0.027**	-0.036***	-0.030***	-0.029***	-0.026**	-0.028***	-0.026**
	(0.010)	(0.011)	(0.011)	(0.010)	(0.010)	(0.010)	(0.010)	(0.011)
Private credit (% of GDP)	-0.040***	-0.039***	-0.043***	-0.037***	-0.026***	-0.023***	-0.025***	-0.023***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.007)	(0.007)	(0.007)	(0.008)
Output gap	-0.430***	-0.447***	-0.421***	-0.430***	-0.318***	-0.327***	-0.318***	-0.326***
	(0.066)	(0.067)	(0.068)	(0.068)	(0.053)	(0.055)	(0.053)	(0.055)
Terms of trade gap*Trade openness	0.334***	0.346***	0.334***	0.339***	0.310***	0.313***	0.304***	0.311***
	(0.052)	(0.051)	(0.051)	(0.052)	(0.040)	(0.041)	(0.041)	(0.041)
L.Cyclically-adjusted fiscal balance (% of GDP)	0.242***	0.163***	0.178***	0.192***	0.213***	0.161***	0.220***	0.161***
	(0.046)	(0.044)	(0.044)	(0.044)	(0.040)	(0.037)	(0.040)	(0.037)
L.Cyclically-adjusted corporate balance (% of GDP)	0.164***	-	-	-	0.144***	-	0.120***	-
	(0.045)				(0.041)		(0.041)	
L.Corporate saving (% of GDP)	-	0.170***	-	0.215***	-	0.203***	-	0.192***
		(0.050)		(0.050)		(0.049)		(0.049)
L.Corporate investment (% of GDP)	-	-	-0.005	-0.089	-	-0.091*	-	-0.074
			(0.056)	(0.058)		(0.052)		(0.052)
Financial crisis dummy	-	-	-	-	-0.000	0.000	-0.003	-0.003
					(0.003)	(0.003)	(0.003)	(0.003)
L.Cyclically-adjusted corporate balance (% of GDP)*Crisis dummy	-	-	-	-	-0.059	-	0.022	-
					(0.053)		(0.064)	
L.Corporate saving (% of GDP)*Crisis dummy	-	-	-	-	-	-0.062	-	-0.024
						(0.062)		(0.072)
L.Corporate investment (% of GDP)*Crisis dummy	-	-	-	-	-	0.089	-	0.022
						(0.064)		(0.073)
Observations	506	506	506	506	706	706	706	706
Countries	25	25	25	25	25	25	25	25
R-squared	0.670	0.649	0.626	0.670	0.668	0.671	0.667	0.667
RMSE	0.027	0.028	0.029	0.027	0.028	0.027	0.028	0.028

*Note: CA is the current account balance in % of GDP. All regressions are estimated by pooled GLS with a panel-wide AR(1) correction. Heteroskedasticity robust standard errors are reported in parentheses. The Models (1)-(4) are estimated for the period 1980-2007. The Models (5)-(8) include a dummy variable for the global financial crisis or for systemic banking crisis. All estimations include a constant term. L. denotes one year lag. *, **, and *** denotes significance at* 10%, 5%, *and* 1% *levels, respectively. See Appendix A for a detailed description of the data.*

Table 4: Current account regression model: Inequality

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Regressor	*CA*	*CA*	*CA*	*CA*	*CA*	*CA*	*CA*	*CA*
L.Net foreign assets (% of GDP)	0.047***	0.047***	0.047***	0.040***	0.046***	0.047***	0.046***	0.041***
	(0.007)	(0.007)	(0.007)	(0.006)	(0.007)	(0.007)	(0.008)	(0.006)
L.NFA/Y*(Dummy if NFA/Y < -60%)	-0.068***	-0.069***	-0.069***	-0.064***	-0.068***	-0.068***	-0.067***	-0.063***
	(0.017)	(0.017)	(0.017)	(0.014)	(0.017)	(0.017)	(0.018)	(0.014)
L.Output per worker (relative to top 3 economies)	-0.022	-0.021	-0.020	-0.023	-0.015	-0.015	-0.012	-0.017
	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)
L.Relative output per worker*Capital openness	0.096***	0.090***	0.089***	0.085***	0.090***	0.086***	0.083***	0.083***
	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)
Dependency ratio	-0.119**	-0.124***	-0.122***	-0.067*	-0.110**	-0.116**	-0.111**	-0.068*
	(0.047)	(0.047)	(0.046)	(0.039)	(0.047)	(0.047)	(0.046)	(0.039)
Population growth	-1.770***	-1.728***	-1.895***	-1.625***	-1.648***	-1.616***	-1.769***	-1.571***
	(0.475)	(0.476)	(0.485)	(0.471)	(0.469)	(0.468)	(0.479)	(0.462)
Financial center status	0.016*	0.016*	0.017*	0.021**	0.015*	0.015*	0.016*	0.019**
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.008)
Institutional/political environment	-0.020	-0.021	-0.019	-0.034	-0.016	-0.017	-0.014	-0.030
	(0.022)	(0.022)	(0.022)	(0.021)	(0.022)	(0.022)	(0.022)	(0.021)
Reserve currency status	-0.020*	-0.019*	-0.020*	-0.025**	-0.019*	-0.018*	-0.018*	-0.026**
	(0.011)	(0.011)	(0.011)	(0.010)	(0.011)	(0.011)	(0.011)	(0.010)
Private credit (% of GDP)	-0.025***	-0.025***	-0.024***	-0.025***	-0.023***	-0.023***	-0.022***	-0.023***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Output gap	-0.306***	-0.306***	-0.297***	-0.322***	-0.312***	-0.310***	-0.304***	-0.319***
	(0.054)	(0.054)	(0.057)	(0.053)	(0.056)	(0.056)	(0.058)	(0.055)
Terms of trade gap*Trade openness	0.301***	0.299***	0.299***	0.303***	0.305***	0.304***	0.304***	0.309***
	(0.043)	(0.043)	(0.043)	(0.041)	(0.043)	(0.043)	(0.044)	(0.041)
L.Cyclically-adjusted fiscal balance (% of GDP)	0.224***	0.226***	0.249***	0.226***	0.179***	0.180***	0.195***	0.167***
	(0.043)	(0.042)	(0.043)	(0.040)	(0.039)	(0.039)	(0.040)	(0.037)
L.Cyclically-adjusted corporate balance (% of GDP)	0.115***	0.118***	0.128***	0.148***	-	-	-	-
	(0.041)	(0.041)	(0.042)	(0.039)				
L.Corporate saving (% of GDP)	-	-	-	-	0.177***	0.179***	0.192***	0.192***
					(0.050)	(0.050)	(0.050)	(0.048)
L.Corporate investment (% of GDP)	-	-	-	-	-0.078	-0.087	-0.083	-0.124**
					(0.052)	(0.053)	(0.056)	(0.054)
L.Top 1% income share	-0.133**	-	-	-	-0.121**	-	-	-
	(0.057)				(0.058)			
L.Top 5% income share	-	-0.101***	-	-	-	-0.094**	-	-
		(0.039)				(0.041)		
L.Top 10% income share	-	-	-0.068**	-	-	-	-0.064*	-
			(0.033)				(0.034)	
L.Gini coefficient	-	-	-	-0.087**	-	-	-	-0.076*
				(0.037)				(0.040)
Observations	656	656	633	706	656	656	633	706
Countries	25	25	25	25	25	25	25	25
R-squared	0.670	0.691	0.694	0.684	0.694	0.693	0.695	0.682
RMSE	0.027	0.026	0.026	0.027	0.026	0.026	0.026	0.027

*Note: CA is the current account balance in % of GDP. All regressions are estimated by pooled GLS with a panel-wide AR(1) correction. Heteroskedasticity robust standard errors are reported in parentheses. All estimations include a constant term. L. denotes one year lag. *, **, and *** denotes significance at* 10%, 5%, *and* 1% *levels, respectively. See Appendix A for a detailed description of the data.*

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