Economic Watch

Cross-Country Emerging Markets Analysis

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Economic Analysis

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Structural Twin Deficits: A problem of the developed world rather than the emerging one

During the last years the balance of risks has moved to a more favorable Risk-Return profile for the Emerging Markets (EM). Supported by a significant improvement in policy management after the lessons learned during the EM crisis, the EM economies find themselves in a sound position. A first "Bird´s eye" of public and current account shows that risks are now concentrated mainly in the developed economies. However, part of this bias could be the result of negative cyclical effects of the crises. This economic watch analyses the structural situation of public and external imbalances and confirming than rather than a cyclical phenomenon the structural Twin Deficits remain favorable for the EM.

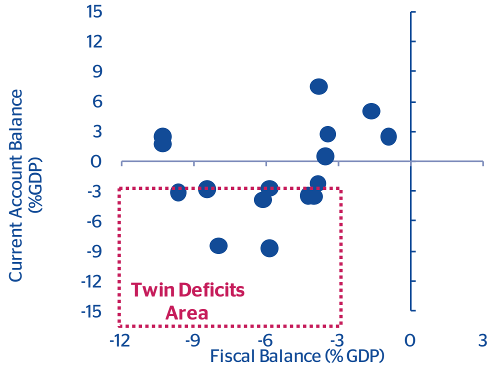
A new Growth-Risk pattern: The traditional Risk-Return balance has changed. Under the new balance higher economic growth is accompanied by lower risk

A first "Bird´s eye" on Twin deficits shows vulnerabilities concentrating in Developed Economies

Going more deeply into the analysis, our "structural view" – excluding the cyclical component of deficits - confirms lower Twin Deficits in EM economies

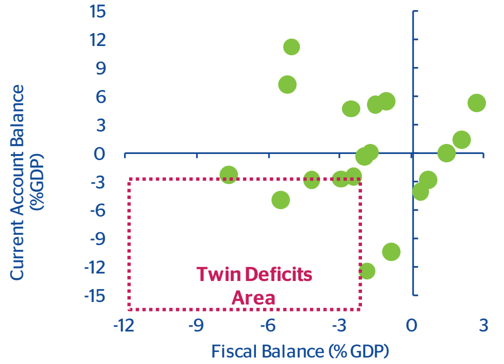
The correction of global imbalances is under way but still at a painfully low pace.

Chart 1
Developed Economies: Nominal Current Account and Fiscal Balance in 2011 (in % of GDP)



Source: BBVA Research and IMF (WEO September 2011)

Chart 2
Emerging Economies: Nominal Current Account and Fiscal Balance in 2011 (in % of GDP)



Source: BBVA Research and IMF (WEO September 2011)

A new Growth-Risk pattern

One of the salient results of the recent crisis has been the change in the risk-growth profile between Developed and Emerging economies. Although Economic Growth has been usually favouring Emerging Markets (EM), the Risk-Return trade-off has generally played against.

This paradigm has started to change as a consequence of the global crisis, although the seeds of the change can be found even before. The Asian and Latin American crisis during the nineties acted as a powerful wake-up call for EM to improve their economic policies. First, they contributed to reduce macroeconomic imbalances. Second, and more importantly, they introduced the idea of a prudential approach to avert problems in the future.

A "Bird´s eye" on twin deficits in Developed and Emerging Markets

A simple view to account for the change in the risk profile of the world is to check visually the current account and fiscal balances in both emerging and developed economies. Chart 1 shows that developed markets imbalances are now more concentrated in the worrisome quadrant (CA and fiscal deficits) and some of them fall inside of the dangerous limits (delimited by imbalances both above 3%). Contrary, the scatter-plot for EM shows a more benign situation, with most of the countries lying outside the 3% twin deficits area.

Obviously, some of the divergent patterns are the result of cyclical effects triggered by the impact of recent crisis. Thus, we consider more relevant to assess the situation of the Structural Twin deficits. To do that we decompose both the current account and fiscal balances in the structural and cyclical component (see Methodology Box) to answer the following questions:

- What is the size of the Structural Twin Deficits?
- Which are the structural drivers of the structural current account deficit?
- How the financial crisis has affected to these structural drivers?

Digging deeper, "Structural" Twin Deficits" (excluding the cyclical component) are generally to be found in developed countries. However some worrisome cases also show up in EM

As described in the methodology box, we estimate a panel for the current account balance, covering the period between 1980 and 2010 for46 economies, which account for around a 90% of the world's GDP1. Explanatory variables considered are the fiscal balance, initial net foreign assets, demographic factors (dependency ratios and population growth), financial deepening, growth, terms of trade, trade openness and the investment ratio (see Methodology Box for detailed explanation).

Applying coefficients to the 5-year moving average of explanatory variables, and adding country effects accounting for omitted factors, we can now estimate an approximation for the **structural component of the current account**. The main findings are the following:

- **Developed Economies:** Except Germany and Japan, the rest of the G7 countries has structural current account deficits. The US, Canada and UK present structural imbalances higher than 2% of GDP. Although relatively high, this is significantly lower than the EU periphery, which in average has a structural deficit of nearly 5% of GDP.
- **Emerging Economies:** Taking BBVA's own grouping of key emerging economies (EAGLEs and their NEST[2]), their structural position is close to equilibrium, namely zero. The largest structural surplus is recorded for Malaysia (near12% of GDP). The structural surplus is also significant in the case of Thailand and Korea (above 5%), the oil and gas exporters (Venezuela and Russia over 4%) and, to a lesser extent, China (1.5%). Contrary, the highest external disequilibrium are found in India and Pakistan (over 6%), followed by South Africa (around 3.5%). Finally, Brazil, Colombia, Peru and Turkey present moderate structural CA deficits (around 2%).

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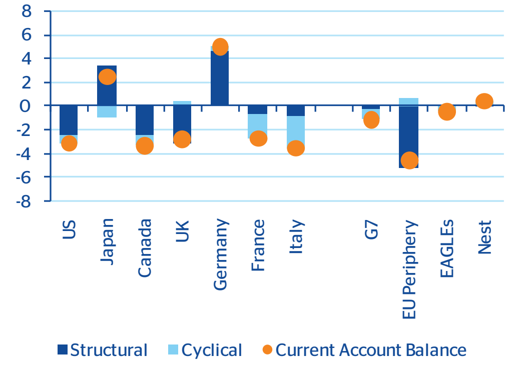
[1] Argentina, Australia, Austria, Bangladesh, Belgium, Bolivia, Brazil, Canada, Chile, China, Colombia, Egypt, Finland, France, Germany, Greece, Hong Kong, India, Indonesia, Ireland, Italy, Japan, Korea, Malaysia, Mexico, Netherlands, Nigeria, Pakistan, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Russia, Singapore, South Africa, Spain, Taiwan, Thailand, Turkey, the United Kingdom, the United States, Uruguay, Venezuela and Vietnam.

[2] Information could be found in www.bbvaeagles.com. A new annual report is forthcoming in February 2012.

Chart 3

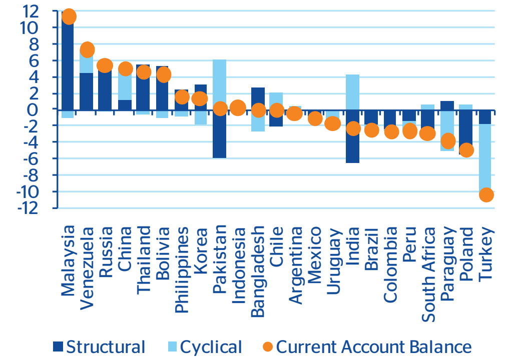
Decomposition of current account in developed countries (2011)



Source: BBVA Research

Chart 4

Decomposition of current account balance in emerging countries (2011)



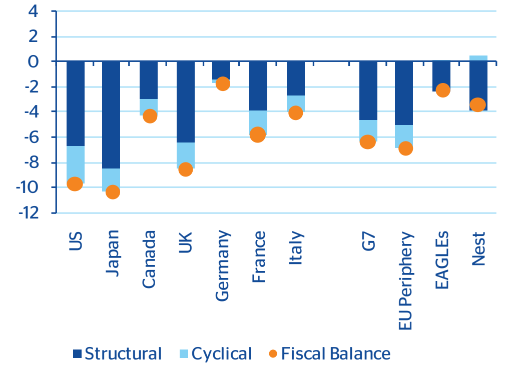
Source: BBVA Research

With respect to **fiscal imbalances**, the relative position of Developed and Emerging economies is also different:

- **Developed Economies:** Most of the G7 (except Germany) present worrisome cyclically adjusted deficits positions. This is specially the case of Japan (8%) and the US and UK (both with near 6.5% structural deficit), but France (4%) and Italy(3%) are also in this situation despite the recent fiscal consolidation adjustments. On average, and after the fiscal consolidation process, the situation of the EU periphery (average of near 5%) is now similar to the G7.
- **Emerging Economies:** Although in a better position, many of the EAGLEs and particularly the NEST have also cyclically adjusted deficits. The highest structural deficit would correspond to Egypt (9% of GDP), India (8%), Poland, Vietnam and Malaysia (6%), Venezuela (close to 5%), Taiwan, South Africa and Paraguay (around 4% in both cases). Colombia, Argentina and Brazil have lower structural current account deficits of around 3% of GDP. These are even lower (2%) for Thailand, Turkey, China, Indonesia and Chile Finally, Russia and Peru record an almost neutral structural fiscal position.

Chart 5

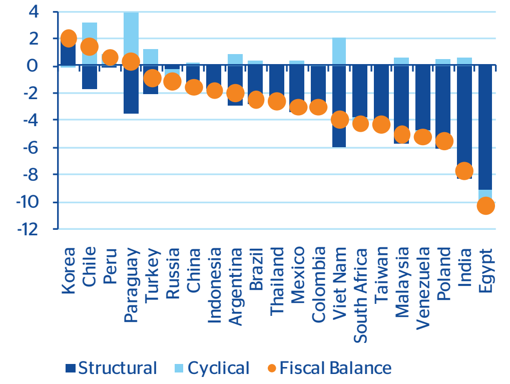
Decomposition of fiscal balance in developed countries (2011)



Source: BBVA Research

Chart 6

Decomposition of fiscal balance in emerging countries (2011)



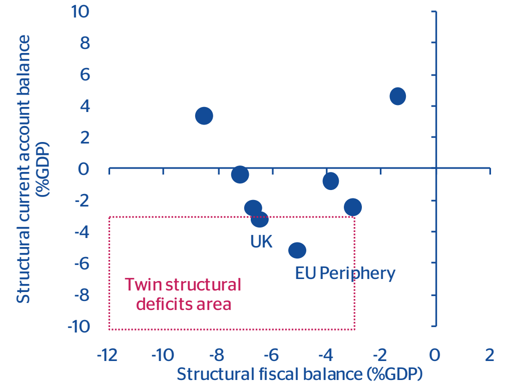
Source: BBVA Research

Who are the kings of twin structural deficits?

Once we have decomposed both the current account and fiscal balance between structural and cyclical components we can determine which countries presents the higher vulnerability position in terms of twin structural imbalances. For this, we identify which countries lay on the structural twin deficits area defined as structural deficits higher than 3%. The main results are the following:

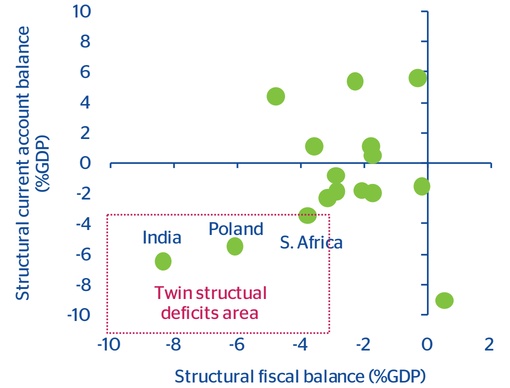
- **Developed Economies:** EU Periphery countries are the countries with higher structural deficits, but the UK position is far from comfortable.
- **Emerging Economies:** Only three countries of our EAGLEs and NEST are inside the vulnerability region. India is the most worrisome case. Poland and South Africa, although inside the vulnerability area, have structural imbalances close to our 3% benchmarks. There are other countries outside the structural twin deficits but with no room, such as Brazil, Turkey, Chile and Argentina.

Chart 7
Structural current account and fiscal balance in developed countries (2011)



Source: BBVA Research

Chart 8
Structural current account and fiscal balance in emerging countries (2011)



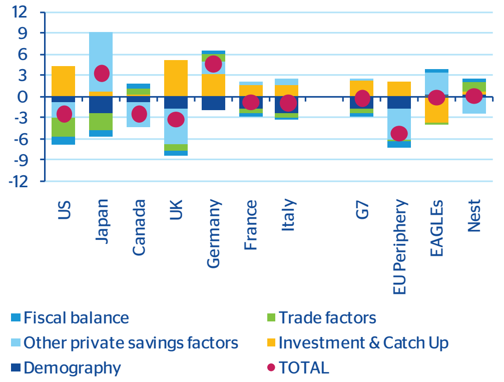
Source: BBVA Research

The drivers of the structural current account balance

Once the model is estimated we can assess for the factors determining the structural current account position. We have grouped the savings related variables in fiscal position, demography (dependency ratios and population growth), other private savings factors (including financial deepening) and trade-related variables. Finally we also account for investment. The main results of the analysis for 2011 are the following:

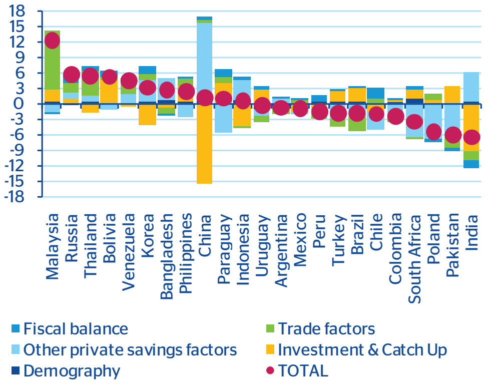
- **Developed Economies:** In general terms saving related factors are responsible for the structural current account positions in 2011 as investment ratios have been reduced during the crisis. This is particularly the case of demography factors, whose negative contribution is uniform across the countries. The twin deficits argument is not homogeneous for the 2011 structural position. There is evidence for the twin deficits argument in the EU periphery countries, US, UK and Japan but not in Canada and Germany. Trade related factors are also responsible of the structural current account balance, weighting negatively in relatively close countries as the US and Japan and, to a lesser extent, in France and Italy, while the effect is positive in Germany and Canada. Other private sector savings determinants, mostly related to financing considerations, are also driving structural deficits in most, but not all, the countries (the main exception being Japan and Germany). Finally, an investment rate below world average is contributing positively to the current account balance for nearly all developed countries.
- **Emerging Economies:** Contrary to the developed economies savings related factors are normally supporting structural balances in the EAGLEs countries. Demography factors are neutral or slightly positive contributors to the EM structural balances as population is more dynamic and young dependency ratios are higher, offsetting their condition of less-aged economies. The fiscal impact has been also positive except for Pakistan and India. The contribution of other private savings factors, which adds for these economies social protection considerations, is not uniform across the countries. It contributes positively in China, India, Russia and Korea. In the other hand, is pressuring structural deficits in South Africa, Pakistan, Brazil, Chile and Turkey among others. There is also asymmetry in the investment driver. There are countries where still low investment rates are supporting structural current account balances (Brazil, Turkey, Philippines and Malaysia) in contrast with very high investment rates pressuring for structural deficits (China, India, Indonesia and Korea).

Chart 9
Decomposition of structural current account in developed countries (2011)



Source: BBVA Research

Chart 10
Decomposition of structural current account balance in emerging countries (2011)



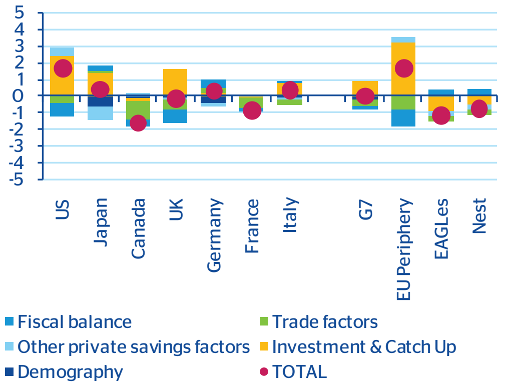
Source: BBVA Research

The effects of the recent financial crisis in the structural current account balance

The current financial crisis has triggered important current account adjustments in some of the countries, driving a partial correction of structural imbalances. Analysis from the contribution of the different factors brings the following conclusions:

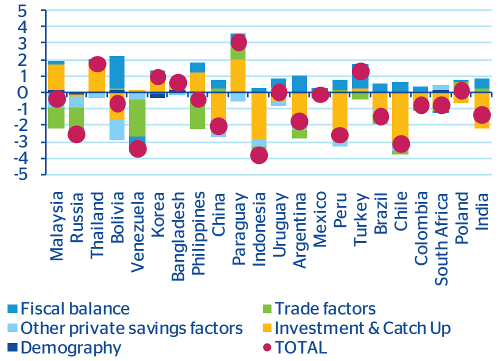
- **Developed Economies:** Previously overheated economies (US, EU periphery) have experienced a positive change in their structural positions (an average improvement of 2 percentage points), mainly due to dramatic changes in the structural component of investment and, to a lesser extent, by the group of other private savings factors due to the de-leveraging process and the increase in precautionary savings. However, fiscal structural deterioration has limited the potential adjustment in these countries. Thus it looks that besides cyclical effects, the de-leveraging process is also improving the structural positions of these economies. Contrary, Japan and Germany did not change significantly their structural positions.
- **Emerging Economies:** Most of the emerging markets economies have experienced a deterioration of their structural position, contributing therefore to the global imbalance adjustment. The main drivers for the adjustment being the investment component followed by the trade related factors in the case of the commodity exporters (due to the big slump of the terms of trade after the crisis). The fiscal factor has contributed to support structural positions as the structural fiscal balances improved relative to the world during the period 2011-2007.

Chart 11
Developed Economies: Structural Current Account Balance Changes (2011 vs 2007)



Source: BBVA Research and IMF

Chart 12
Emerging Economies: Structural Current Account Balance Changes (2011 vs 2007)



Source: BBVA Research and IMF

Methodology Box: Decomposing structural and cyclical Current Account and Fiscal Balances

Decomposing Cyclical and Structural Components of the Current Account Balance

The literature on current account balance determinants has focused on a set of alternative indicators used as explanatory variables of savings and investment[3]. Savings determinants, either for the public or the private sector, are the following:

- **Fiscal balance:** The relationship between fiscal policy and private saving and current account depends on the extent to which consumers react in a Keynesian or Ricardian manner. The Keynesian model assumes that a higher fiscal deficit, as a result of lower taxes or higher government spending, increases disposable income and thereby consumption and decreases private saving, leading to a higher current account deficit and thus supporting the twin-deficit hypothesis. However, this hypothesis does not necessarily hold when consumers perceive the fiscal situation as increasingly unsustainable, then tax increases or reduction in government spending (i.e. fiscal consolidation) are expected in the future, and agents will decrease consumption and increases precautionary saving ("Ricardian Equivalence"). Although both theories coexist theoretically, most of the empirical literature support the Keynesian argument, therefore a positive sign should be expected.

- **Net foreign assets (NFA) initial position:** Although theoretical analysis could lead to ambiguous results, most of empirical analysis shows a positive relationship. In one hand, highly indebted countries (negative NFA) typically record negative income flows, which weigh negatively on the current account. In the other, high levels of indebtedness (i.e. negative NFA) are expected eventually to improve their current account position to preserve long-term solvency, suggesting a negative association.

- **Demographics:** A higher share of the economically inactive dependent population normally reduces national saving and decreases the current account balance. To proxy for this, our model includes both old and young age dependency ratios. We also use population growth to capture future labor force availability, which would allow to run deficits on account of future income generation. All the three demographic variables are expected to decrease the current account balance so a negative sign should be observed.

- **Financial deepening:** Meanwhile a well developed financial system could induce more savings because higher returns are expected thus accounting for a positive coefficient, the process of deregulation in financial markets is usually associated with lower levels of private saving, as a higher degree of capital market integration allow banks to lend at a lower cost to individuals, for instance for house purchases or consumption. This may lead to significant decline in savings.

- **Relative income per capita and growth ("Catch Up effects"):** Under their development process, low-income countries in transition are expected to have external deficits. Economies involved in a rapid transition process could be anticipating increasing future income, leading to lower savings and higher investment. However, the permanent income channel could be not working due to borrowing constraints. Besides Economies that are in the early stages of economic development have a greater need for investment and are likely to finance investment through external borrowing.

- **Terms of trade & trade openness:** An external determinant of saving as an improvement in terms of trade raises real income level and raises savings (as marginal propensity to consume is lower than one). The net effect depends basically on trade openness, but the sign should be positive. Fluctuations rely on the net exporter or net importer condition of the country in certain products, such as commodities. Most of the regressions only consider the oil trade balance, but some countries may depend more on other raw materials, as the case of copper revenues in Chile. **Trade openness:** Used as a proxy for trade barriers, the sign is ambiguous as openness doesn´t predefine the direction of trade flows, although for the sample here used those countries with very high trade openness show currently a significant current account surplus.

Once determinants for savings are accounted for, we measure investment directly by introducing investment in the model. If the investment ratio were to increase, given a certain saving ratio, we should expect a worsening in the current account balance. However, **investment ratio is expected to have** investment may generate such productivity gains in the future that it could eventually improve the current account balance through larger exports. which would allow present generations to spend more[4].

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[3] A very interesting summary paper is "Thousands of Models, One Story: Current Account Imbalances in the Global Economy", Michele Ca' Zorzi, Alexander Chudik and Alistair Dieppe, The Globalization and Monetary Policy Institute, Federal Reserve Bank of Dallas, Working Paper No. 100, December 2011 (www.dallasfed.org/institute/wpapers/2011/0100.pdf). Other valuable references are "Current account benchmarks for Central and Eastern Europe", Michele Ca' Zorzi, Alexander Chudik and Alistair Dieppe, ECB Working Paper Series, NO 995 / January 2009 (www.ecb.int/pub/pdf/scpwps/ecbwp995.pdf), "Global imbalances: a saving and investment perspective", Chapter II, IMF World Economic Outlook, September 2005 (www.imf.org/external/pubs/ft/weo/2005/02/pdf/chapter2.pdf), "Current Account Balance Estimates for Emerging Market Economies", Leandro Medina, Jordi Prat and Alun Thomas, IMF Working Paper 10/43, February 2010 (www.imf.org/external/pubs/ft/wp/2010/wp1043.pdf) and "Structural and cyclical factors behind current-account balances", Celista Cheung, Davide Furceri and Elena Rusticelli, OECD Working Papers No.775, 2010 (http://bit.ly/yj3Xvn). Moreover, interesting case studies for countries with structural surplus and deficit were discussed in the recent IMF Seminar "Analyzing (External) Imbalances" (www.imf.org/external/np/seminars/eng/2012/imbalances/index.htm).

[4] In addition to these variables, a dummy is sometimes used included for Asian countries to account for the long-lasting downward effect on investment ratios following the late '90s crisis.

We have estimated a range of models to assess robustness of the specification: a model with 5-year non-overlapping periods and random country effects, two models with 5-year overlapping periods, one with random country effects and the other one with fixed country effects, and three models with yearly observations, one of them dynamic (including the lag of the dependent variable) and the other two non-dynamic, one of them with random country effects and the other one with fixed country effects. These three last models distinguish between short-term and long-term coefficients.

For estimation and forecast purposes we have selected the model with yearly observations, fixed effects and which distinguishes between short-term and long-term coefficients. Variables are all computed in deviations from world average, except for the case of the dependent variable, the net foreign assets, the oil trade balance and the change of the terms of trade, as in all cases the world average should be zero **The main results from our estimations are in line with economic literature:**

- The fiscal balance (as a percentage of GDP) presents a positive and significant long-term elasticity to the current account balance (0.32). In other words, our results support the Keynesian "twin deficits" explanation.

- All demographic variables present the expected negative sign, with large long-term coefficient for the old age dependency ratio (-0.17) and population growth (-0.57), while the young age dependency ratio has a more limited impact (-0.02) and a very low significance.

- External variables show a positive impact in the current account, much more significant and relevant in the case of the oil trade balance as percentage of GDP (0.15) than for the change in the terms of trade (0.01). Trade openness (the sum of trade flows as a percentage of GDP), which has an a priori ambiguous sign, also seems to have a positive effect (0.09).

- The investment ratio shows a high and significant negative coefficient (-0.70), helping to explain the current account reversals observed after the Asian crisis and actual corrections in euro zone periphery countries.

- There are a number of factors which we find to be irrelevant, at least in our model specification, like the amount of accumulated wealth (net foreign assets)[5], financial deepening or real GDP growth catch up effects.

Decomposing Cyclical and Structural Components of the Fiscal Balance

Fiscal literature is less prolific on empirical panel estimations, as there are no theoretical reasons to expect common income and expenditure elasticity for all the countries. For that reason, we rely in the methodology developed by the IMF to decompose the cyclical and structural fiscal balances for the countries in our sample[6]. Under this approach individual country elasticities are used for both revenue and expenditure sides of the fiscal balance.

To compute the structural or cyclically adjusted budget balance the cyclical component is extracted independently from revenues and expenditures. This component is then subtracted from aggregate figures to obtain the structural balance. Cyclically-adjusted revenues can be obtained by adjusting actual revenues for the effect of the deviation of potential from actual output, with the revenue elasticity defining the strength of the cyclical effect[7].

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[5] The impact of net foreign assets is ambiguous and conditional on model specifications, maybe because its explanatory power is being absorbed by country effects.

[6] See complete methodology in "When and How to Adjust Beyond the Business Cycle? A Guide to Structural Fiscal Balances", Fabian Bornhorst, Gabriela Dobrescu, Annalisa Fedelino, Jan Gottschalk and Taisuke Nakata, IMF Technical Notes and Manuals, April 2011 (www.imf.org/external/pubs/ft/tnm/2011/tnm1102.pdf).

[7] An elasticity larger than one implies that an increase in the output gap triggers a more than proportional change in revenue. The same strategy is applied to expenditure, although, in this case, the elasticity should be positive and close to zero.

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