# Germany's external position against the background of increasing economic policy surveillance

In response to the financial and economic crisis, efforts have been undertaken at the European and global level alike to intensify existing economic policy coordination. The idea behind EU economic governance and the G20 Mutual Assessment Process (MAP) is to assess the sustainability of economic developments. The European surveillance procedure will begin with an early warning system on the basis of selected indicators. The present article outlines methodologies for identifying benchmarks which can be used to define a sustainable external position. If signs of potential or existing imbalances are confirmed as the result of a detailed country analysis, recommendations that prompt the affected economies to undertake economic policy reform should be issued. Empirical studies by the Bundesbank have shown that the saving and investment decisions which lurk "behind the current account" can be influenced only moderately by market-conforming economic policy measures. In addition, time lags make it difficult to attribute the effects clearly to the current account.

With regard to Germany, the current account surplus has come under criticism. The surveillance procedure could additionally fuel this criticism if – as is looking ever more likely – positive current account positions are also seen as an indication of potentially unsound developments. However, it should be noted that Germany's high net savings by international standards – unlike current account deficits – do not result in payment obligations which, if not met, would put other countries or the stability of monetary union at risk.

The current account balance and external position are ultimately not independent economic policy targets but instead the result of numerous, largely private-sector decisions at home and abroad. However, taken together, these could lead to unsustainable developments which would hamper the ability of European monetary union to function and increase the vulnerability of the international capital markets. On the other hand, given the diagnostic problems described above and the limited efficacy of economic policy measures, a balance needs to be struck between justified intervention in order to avert risks to the stability of other economies or the euro area as a whole and economic fine-tuning, which needs to be avoided.

## Introduction

The financial crisis has pushed global imbalances increasingly to the centre of the economic policy debate. The pronounced disparities between various economies' saving and investment behaviour had already, in earlier years, indicated unsustainable global economic development – after the outbreak of the financial crisis, they were also frequently held to be one of the reasons for the crisis.[1]

The imbalances existing in the euro area, too, have been the topic of controversial debate.[2] The current account positions of the euro area's current member states have been persistently and steadily growing apart since the mid-1990s. Whereas since the turn of the millennium not only Germany but also Austria, Belgium, Finland, the Netherlands and Luxembourg have reported, in some cases, growing current account surpluses – Germany hit a national all-time high in 2007 at nearly 7.5% of gross domestic product (GDP), which was exceeded by Luxembourg and the Netherlands – the current accounts of all other euro-area countries posted deficits

### External positions of euro-area countries

2010, as a percentage of GDP
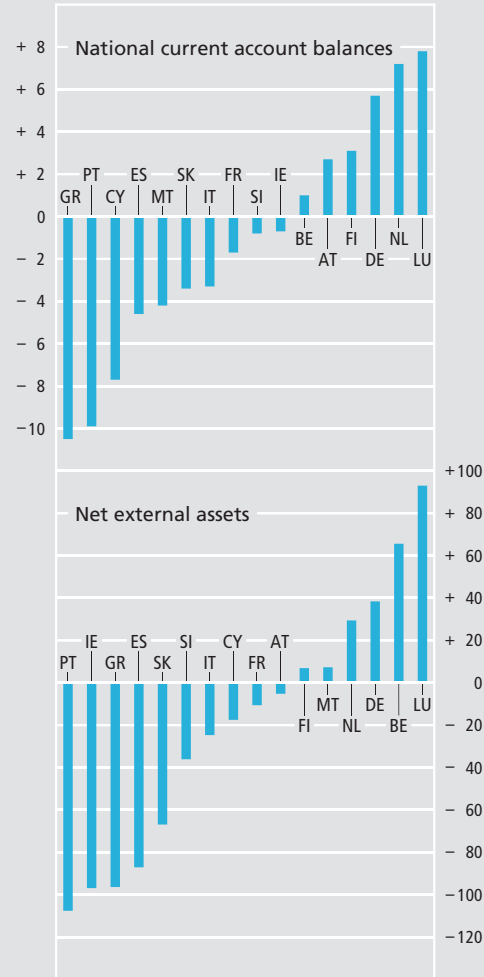


Sources: Eurostat, IMF and Bundesbank calculations.

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which, in some cases, were rising significantly.

There were accordingly sizeable shifts in all these economies' external positions. Germany's net external assets rose from 8.7% of GDP in 2001 to 38.4% at the end of 2010. By contrast, the net external debt of, for instance, Portugal, Greece and Spain, but also

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**1** Although the ample inflow of liquidity into the United States might have encouraged the exaggerations in the US housing market, it was probably primarily regulatory defects which were to blame for the collapse of the US subprime market. See ECB, Prospects of real and financial imbalances and a global rebalancing, Monthly Bulletin, April 2010.
**2** See Deutsche Bundesbank, On the problems of macroeconomic imbalances in the euro area, Monthly Report, July 2010, pp 17-38, as well as European Commission (2006), Focus: Widening current account differences within the euro area, Quarterly Report on the Euro Area, Vol 5, No 4, pp 25-37 and European Commission (2010), Surveillance of intra-euro-area competitiveness and imbalances, European Economy 1, Directorate General, Economic and Financial Affairs.

some newer central and east European members of the euro area, has risen sharply.

*Different macro-economic developments not fundamentally problematic in a monetary union, …*

Even in a monetary union, disparities in macroeconomic developments are not in and of themselves indicative of growing imbalances. For example, it appears fundamentally quite justifiable for countries that have an increasingly ageing population and a high per capita income to have a higher saving ratio than countries with a growing population and less-well-developed economies which are funding their consumption and investment in part by borrowing from other countries, in expectation of a rapid and extended convergence process.[3]

Moreover, the increased integration of financial markets has also led to diverging investment trends. The provision of capital where investors expect it to earn the highest marginal returns and the resulting pronounced investment activity in southern, central and eastern Europe are fundamentally consistent with standard economic thinking.

*… yet root causes have to be borne in mind*

However, even before the financial crisis broke out, the dimensions of the current account deficits in conjunction with the accumulated net external debt of some countries led some to ask to what extent these balances are sustainable and truly consistent with the need to fund the catching-up process. Studies have presented evidence of shifts in euro-area countries' current account positions, in some cases far beyond levels that can be explained by real economic convergence alone.[4]

The financial crisis exposed these imbalances, forcing the affected countries to adjust, in some cases considerably.[5] However, the reduction in the current account deficits was also partly due to the cyclical slowdown; a fundamental, long-term weakening of the disparities is therefore not yet assured. It would also be much easier to undertake the necessary adjustments if the supply side were strengthened to make up for the unavoidable cutback in domestic demand. In this respect, the outcome is mixed: while some deficit countries have already started to see their competitiveness improve considerably, in other countries the causes of the pre-crisis distortions are still in place. Without extensive structural reforms, the imbalances are threatening to rise once again as economic recovery progresses.

*Diminishing external imbalances caused by crisis have not obviated need for structural reform*

## Increased economic policy surveillance at European and global level

There is a broad political consensus at the European and global level that a renewed build-up of imbalances needs to be prevented through the stronger international coordination of policy. Along these lines, in March 2010 the European Council estab-

*Growing economic policy surveillance at European and global level*

**3** See M Ca'Zorzi, A Chudik and A Dieppe (2009), Current account benchmarks for central and eastern Europe: a desperate search?, Working Paper Series, No 995, European Central Bank.
**4** See Deutsche Bundesbank, Current account balances and price competitiveness in the euro area, Monthly Report, June 2007, pp 33-53.
**5** See European Commission (2010), Special issue: The impact of the global crisis on competitiveness and current account divergences in the euro area, Quarterly Report on the Euro Area, Vol 9, No 1; P R Lane and G M Milesi-Ferretti (2011), External adjustment and the global crisis, Working Paper No 197, International Monetary Fund.

lished the Van Rompuy task force with the goal of developing a European surveillance procedure to identify at an early stage, and help to correct, macroeconomic imbalances and shifts in competitiveness.[6] At the global level, the G20, under the MAP, has created guidelines which are likewise designed to identify external imbalances and reduce them to a sustainable level.[7]

Both sets of measures are intended to obtain the most comprehensive picture of potential risks possible while at the same time keeping the surveillance mechanism simple and transparent. The two procedures share many things in common. However, the underlying legal frameworks, as well as the powers of the bodies responsible for setting up and implementing these procedures, are not comparable. Since the EU process has much more ambitious aims and is likely to entail further-reaching consequences for Germany, the present article will focus on the planned European surveillance procedure.

*EU legislative process nearly complete*

At European level, a six-part package of legislation, called the "six pack", was approved by the Council of the European Union on 4 October 2011.[8] This legislation provides not only for a reform of the Stability and Growth Pact but also stronger surveillance over national economic policy.[9] The European Parliament had previously already approved the package of measures. The responsible bodies are discussing the further details of the surveillance procedure.[10]

The first step in EU economic governance is to monitor economies based on a small set of macroeconomic variables. In the near future, the Commission intends to finalise a catalogue of indicators which follows the guidance provided by the adopted legislation. The "scoreboard" will include not only the cur-

*Early warning mechanism provides initial signs of imbalances …*

6 See Conclusions of the European Council of 25-26 March 2010, 26 March 2010, EUCO 7/10, Europe 2020: A new European strategy for jobs and growth.
7 See IMF, G-20 Mutual Assessment Process – IMF Staff Assessment of G-20 Policies (www.imf.org/external/np/exr/facts/g20map.htm). At the Paris G20 summit in February 2011, details of the early warning mechanism, such as the choice of indicator, were formulated. The indicators to be examined include public debt, fiscal deficits, private saving rate, private debt, and the external imbalance composed of the trade balance and net investment income flows and transfers, taking into account exchange rate, fiscal and monetary policy aspects. It should also be borne in mind when choosing a group of countries for a detailed analysis of macroeconomic sustainability that large economies have the potential for particularly strong contagion to the global economy. Economies defined here as large and therefore "systemically important" are those that generate more than 5% (based either on market exchange rates or purchasing power standards) of total G20 GDP. Agreement was reached at the IMF Spring Meeting in April 2011 on methodological approaches to calculating the benchmarks for the early warning indicators. These guidelines will contain not only a structural, ie econometric, approach but also statistical methods. Agreement on further steps, especially sustainability analyses for those economies which have been flagged by the early warning system, and the action plans and commitments to economic policy actions to correct imbalances, were discussed at the Cannes G20 summit in November 2011. See Communiqué, Meeting of Finance Ministers and Central Bank Governors, 14 and 15 April 2011, www.g20.org/pub_communiques.aspx.
8 The texts were formally adopted by the Ecofin Council on 8 November 2011 and then published. See Council of the European Union (2011), Council confirms agreement on economic governance; European Commission (2011), Proposal for a Regulation of the European Parliament and of the Council on the prevention and correction of macroeconomic imbalances, 2010/0281 (COD); European Commission (2011), Proposal for a Regulation of the European Parliament and of the Council on enforcement measures to correct excessive macroeconomic imbalances in the euro area, 2010/0279 (COD).
9 See European Commission (2011), EU economic governance "six pack" – state of play, MEMO/11/647; European Commission (2011), EU economic governance: a major step forward, MEMO/11/364.
10 Prior to approval by the Ecofin Council, macroeconomic surveillance in the EU had already been given a boost by the introduction of the European Semester in the first half of 2011. The European Semester revolves around economic policy coordination in the areas of fiscal and macro policy and regarding structural reform. The process was continued in March 2011 by directing

rent account balance, net external position, real effective exchange rate, export market share, price and cost measures and indicators of non-price competitiveness but also variables such as house prices, private credit growth, unemployment and private and public debt, in order to measure not only external divergence but also potential internal imbalances. In the longer run, the scoreboard may be subject to adjustment as a result of regular review.[11]

Moreover, the plan is to use benchmarks – which must not be misconstrued as policy goals – to pre-select those countries that show signs of unsustainable developments.
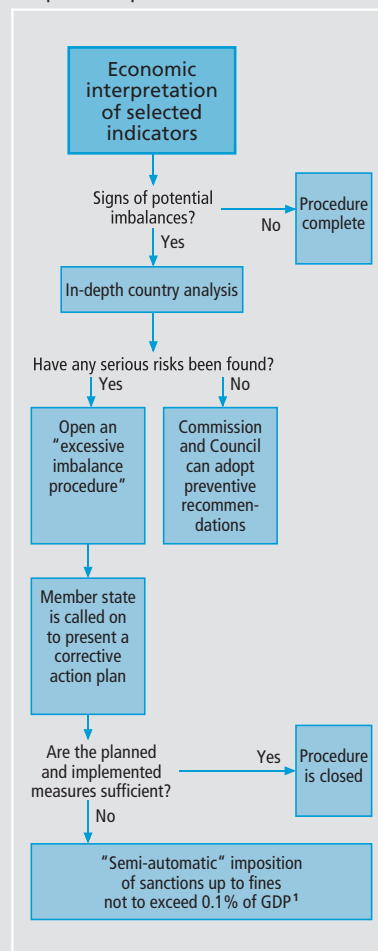


The EU's macroeconomic surveillance procedure

Simplified representation

**1** Sanctions can only be turned down by a qualified majority in the Council. They are imposed solely on euro-area member states.

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Deviations from the benchmarks, however, are not automatically interpreted as warning signals; only in combination with an "economic reading" is it possible to identify any signs of potential imbalances.[12]

Step two of the EU's economic governance is a detailed analysis of the current macroeconomic developments in those countries for which the early warning system from the first

*... but must be supplemented by detailed country-specific analyses*

**10** (cont'd) country-specific policy recommendations to the member states. The approval of the Europe 2020 strategy in June 2010 by the European Council likewise considerably strengthened the options for monitoring member states' budgetary and structural policy. Moreover, in the Euro Plus Pact, the member states of the euro area and six other EU member states agreed further steps to improve competitiveness, employment and fiscal policy sustainability and to make progress in tax policy. Macroeconomic surveillance will generally follow the time schedule of the European Semester. However, the new package of laws contains a specific clause allowing the process to independently activate in an emergency. See European Commission (2010), Communication from the Commission, Reinforcing economic policy coordination, COM(2010) 250 final, 12 May 2010; European Commission (2010), Economic governance package (3): Chronology and overview of the new framework of surveillance and enforcement, MEMO/10/456.
**11** See European Commission (2010), Report of the Task Force to the European Council – Strengthening economic governance in the EU, 21 October 2010 (www.european-council.europa.eu/the-president/taskforce.aspx); also Why the Task Force proposals will make the European economies more crisis proof, Factsheet on the surveillance procedures in the EU, 21 October 2010. For more on the forthcoming surveillance process see also M Buti (2011), Europe in crisis – Balancing imbalances: improving economic governance in the EU after the crisis, CESifo Forum, 2/2011.
**12** The stability and convergence programmes as well as the national reform programmes are additionally taken into account. A role is also played in this context by a country's capacity for adjustment, ie the extent to which its economy is able, through price, wage and labour market flexibility, as well as balance of payments adjustments, to contribute to offsetting existing imbalances.

step has found signs of potential imbalances. This can also imply "missions" to the affected countries. The idea is that, at this stage of the procedure, specific national developments and characteristics of individual economies are factored into the sustainability analysis. This enables a decision on whether the potential disequilibria identified in the first stage actually need to be regarded as problematic.

If there are significant signs of future imbalances, the Council – on the basis of recommendations by the Commission – will direct economic policy recommendations for "preventive action" to the country in question. If there is sound evidence that serious macroeconomic imbalances either exist or are developing, including those that jeopardise the smooth functioning of the entire economic and monetary union, an "excessive imbalance procedure" is launched. The countries whose economies are affected are consequently given a specific deadline within which to develop and present a "corrective action plan", compliance with which is monitored based on an agreed "roadmap".

This corrective element of the surveillance procedure applies to all EU member states; however, only euro-area member states can be punished by sanctions for non-compliance. The approach is two-fold. First-time offenders in breach of the agreed measures are required to pay an interest-bearing deposit. The second breach is punishable by converting the interest-bearing deposit into a fine (of up to 0.1% of GDP). These procedures are adopted by what is known as "reverse qualified majority voting": a recommendation is

regarded as adopted if it is not rejected by a qualified majority of member states.[13]

*External assets and current account should be interpreted asymmetrically*

One topic of controversy during the negotiations was whether external surpluses should be regarded as imbalances to the same extent that deficits are. Current account surpluses lead to an accumulation of external assets. Unlike deficits, however, claims on non-residents do not create any payment obligations. They therefore do not amplify the risk of default or a national balance of payments crisis with negative spillover to other countries. It is not least for this reason that the net external assets criterion does not appear to be problematic for Germany at present and has accordingly not been brought up in the political debate.

The same line of reasoning also applies, in principle, to current account surpluses. However, there would be an exception if these are based on internal distortions which themselves could also spill over to other economies. Negative spillover effects would also be possible in some cases if the surplus countries' capital exports are confined to a very few countries and lead to tensions in the real economy or financial sector in those places. However, the risks associated with surpluses are quite different from those associated with current account deficits; it therefore appears

13 At present, 255 out of 345 weighted voting shares in the Council is regarded as a qualified majority. In addition, a member state may request a review on whether the qualified majority represents at least 62% of the entire population of the European Union. Once a transitional period has expired, another criterion will be in force beginning not later than 31 March 2017. A decision will then need to be approved by at least 55% of the member states, representing at least 65% of the Union's population, to represent a qualified majority.

not only appropriate but also necessary for an early warning system to treat the two phenomena differently.

The adopted procedure, however, will not be confined exclusively to countries running current account deficits. Although the early warning system is primarily designed to be conducive towards promoting competitiveness, and the scoreboard and benchmarks are to be designed with this objective in mind, the European Parliament negotiated an additional requirement that even countries running current account surpluses come under scrutiny in cases where the sources of macroeconomic instability need to be found.

### The sustainability of external asset positions: methodological approaches

*Sustainability of external asset positions is difficult to assess*

The sustainability of a given economy's external asset position is difficult to assess specifically. Various empirical procedures can be employed to distinguish sustainable developments from unsustainable developments. None of these approaches, however, is free of methodological deficiencies and therefore above criticism.

*Anecdotal evidence, …*

Anecdotal evidence attempts to show a relationship between the historical pattern of economic variables and the existence of crises. Thus, for example, with regard to the current account, it can be seen that past deficits were frequently accompanied by a balance of payments crisis if they exceeded between 4% and 6% of GDP for a protracted period of time.[14] However, there are also

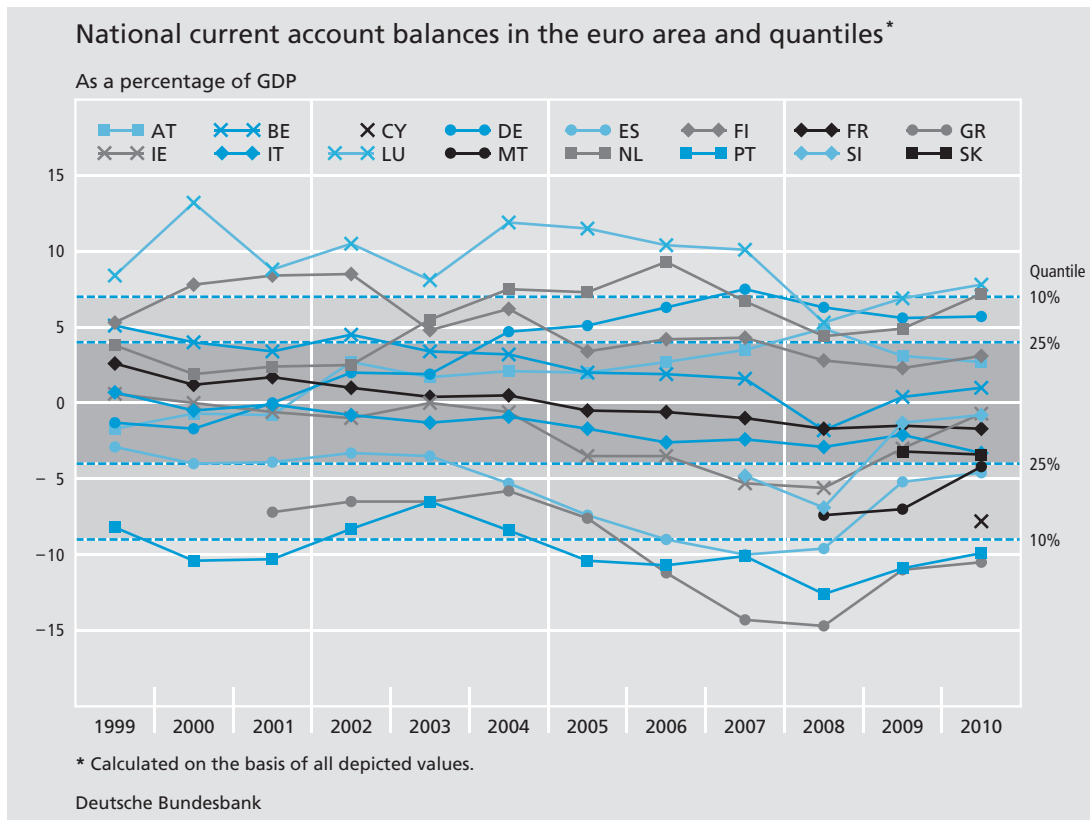many cases in which such developments did not culminate in crises.

Statistical procedures are relatively simple and transparent and are based on historical data patterns. They generally assume that values of a given metric which are near their average (over time and across the economies in the study) are nothing to be alarmed about in principle. By contrast, extreme values, such as particularly high current account deficits or external debt levels which are well above average, are seen as meriting closer attention.

*… statistical procedures …*

Possible thresholds for triggering closer scrutiny could be the metric entering the lower or upper 10% quantile or the lowermost or uppermost quartile of all observations. On the basis of the national current account balances of the individual euro-area member states (changing composition) between 1999 and 2010, these thresholds would come out to -9% (10% quantile) or -4% (25% quantile) of GDP for deficit countries, depending on the quantile chosen.[15] In 2010, Greece (-10.5%), Portugal (-9.9%) and, narrowly interpreted, also Cyprus (-7.7%), Spain (-4.6%) and Malta (-4.2%) would have merited closer scrutiny. For current account surpluses, the relevant thresholds would have been +4% (25% quantile) and +7% (10% quantile) of GDP, putting Luxembourg (+7.8%), the Netherlands (+7.2%) and – if the strict benchmark

**14** See commentary by L H Summers in R Hausmann and L Rojas-Suárez (eds) (1996), Volatile capital flows, pp 17-25; or C M Reinhart and K S Rogoff (2009), This time is different – Eight centuries of financial folly.
**15** Other observation periods and groups of countries would lead to different thresholds.

National current account balances in the euro area and quantiles*

As a percentage of GDP



* Calculated on the basis of all depicted values.

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is used – Germany (+5.7%), too, in the critical zone.

*… or econometric approaches provide initial signs of imbalances*

Econometric procedures are based on estimated economic relationships between, for example, the current account position and certain macroeconomic determinants. Essentially, a crucial difficulty lies in identifying the relevant fundamental factors and, on that basis, defining an acceptable or desired pattern of these variables in order to derive robust data on current accounts and net external assets.

The results of panel studies are frequently used to determine internationally comparable estimates of structural (sustainable) current account balances; this means a joint estimation for all countries in the sample over a

given timeframe. Multiplying the estimated coefficients by the country-specific fundamental factors yields different thresholds. Herein lies one major difference to the statistical procedures addressed earlier. Differences between the feature carriers not explained by the regression equation are reflected either in fixed, indeterminate effects or in residuals. Further analysis is usually needed for interpreting them. However, the results of such estimations can already provide important indications of areas where economic policy can be adjusted; this is an additional advantage of econometric procedures.

Neither statistical nor econometric procedures provide any definitive information on the extent to which deviations from the thresholds are linked to uncontrolled adjust-

*All procedures have weaknesses and are open to criticism*

ments, either at home through the formation of bubbles or between economies through abrupt and expansive capital flows and – in the case of non-euro-area countries – exchange rate volatility. Non-linear processes could be the reason why only deviations above a certain threshold imply turmoil while smaller deviations are virtually without consequences. It is also very difficult to weigh the individual indicators in terms of relevance. The planned surveillance procedures therefore generally equate all indicators implicitly and subject them to an economic assessment. The fact that only economically significant deviations of multiple indicators should be interpreted as a sign of crisis should enter into this assessment.

*Additional country-specific analysis therefore necessary*

There is ultimately no procedure which provides unambiguous and uncontroversial quantitative guidance or benchmarks. All results are fraught with high uncertainty. The difficulty in deriving robust benchmarks underscores the need to supplement the procedures described above with more in-depth macroeconomic studies which look closely at country-specific characteristics. Moreover, the considerable uncertainty means that it makes sense not to use the empirical results as point estimates but to permit a range of acceptable values. It must always be borne in mind when interpreting empirical results that, although they are able to show – based on past experience – the initial signs of potential unsound developments, they do not offer ironclad certainty of thereby preventing any sort of future crisis developments altogether.

## Econometrically estimating external positions: a practical example

Irrespective of the flaws of econometric analyses presented earlier, empirical estimations provide important information about the determinants of, for instance, current account trends in the EU. A better understanding of the underlying economic interrelationships can thus be obtained.

According to the "macroeconomic balance approach",[16] current account developments can be described as being in equilibrium if they are determined by sustainable fundamentals. According to the results of a Bundesbank panel estimate, after initially showing the inverted relationship at an early stage, an increase in per capita income, rising debt to non-residents in the beginning, a higher (lower) percentage of older (younger) persons not participating in the labour force, a reduction in the public deficit and declining private investment tend to be associated with a significant reduction in existing current account deficits and/or a transition to current

*Using econometric estimations to determine key factors that influence current account balances*

16 This approach estimates the development of the current account as a function of macroeconomic fundamentals. According to intertemporal balance of payments theory, in any given economy independent saving and investment decisions are taken first ("internal equilibrium"). Any resultant positive or negative current account imbalance is then brought back into balance over the long term by adjusting the real exchange rate ("external equilibrium").

Empirical panel study on the fundamental determinants of current account balances

The main determinants of current account balances are identified below using a panel approach. Along the lines of the IMF's macroeconomic balance approach, an equilibrium relationship between the current account balance and a number of fundamental variables is assumed.[1] The underlying data set covers the 27 EU countries over the 1994 to 2009 period. We estimate the regression equation[2]

$$CA_{i,t} = \rho_0 + \rho_1 NFA_{i,t-1} + \rho_2 OIL_{i,t} + \rho_3 GRT_{i,t} + \rho_4 GDP_{i,t} + \rho_5 QGDP_{i,t}$$
$$+ \rho_6 DEP\_Y_{i,t} + \rho_7 DEP\_O_{i,t} + \rho_8 FISC_{i,t} + \rho_9 INV_{i,t} + \varepsilon_{i,t} ,$$

where $CA$ is the current account balance as a percentage of GDP, $NFA$ net foreign assets as a percentage of GDP, $OIL$ the oil balance in relation to GDP, $GRT$ the annual percentage growth of (real) GDP, $(Q)GDP$ (squared) per-capita income, $DEP\_Y$ the ratio of dependent youth (< 15 years) to the total population, $DEP\_O$ the ratio of elderly dependents (> 64 years) to the total population, $FISC$ the fiscal balance and $INV$ private investment.[3] The sub-indices $i$ and $t$ denote countries and observation year respectively and $\varepsilon$ is the error term.

According to the results of the empirical study,[4] the relationship between (lagged) net foreign assets and the current account balance is significantly negative. By motivating increased domes-

### Determinants of the current account balance

| Variable | Current account (in % of GDP) |
|---|---|
| $NFA$ (t–1) | – 0.014*** |
| | (– 2.22) |
| $OIL$ | 0.008 |
| | (1.07) |
| $GRT$ | 0.042 |
| | (0.79) |
| $GDP$ | – 0.531*** |
| | (– 4.18) |
| $QGDP$ | 0.002*** |
| | (3.95) |
| $DEP\_Y$ | – 0.520*** |
| | (– 3.33) |
| $DEP\_O$ | 0.714*** |
| | (2.46) |
| $FISC$ | 0.119*** |
| | (2.60) |
| $INV$ | – 0.840*** |
| | (– 11.54) |
| $R^2$ | 0.96 |
| Durbin-Watson | 1.99 |

t-values in brackets. — *** (**) [*] denote significance at the 1% (5%) [10%] level.

tic saving, a rise in external debt tends to be accompanied by a reduction in existing current account deficits or the transition to current account surpluses. The direct accounting effect of rising external debt with higher interest payments and dividends is apparently overcompensated. Over the longer term, this therefore appears to empirically confirm a reduction in existing imbalances.

The influence of the oil balance shows the expected sign, but is not significant. The hypothesis that capital tends to flow to faster-growing econ-

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omies is likewise not supported by the empirical study. This result, which is also confirmed by other empirical studies, is referred to and discussed in the literature as the "allocation puzzle".[5]

By contrast, the estimates support the "stage of development theory" of a non-linear relationship between per-capita income and the current account. In less developed economies with restricted access to the international capital markets, capital inflows initially expand as incomes increase. However, as the economic catching-up process progresses, the relationship – on an average of the countries in the study – reverses itself, until ultimately current account surpluses can be achieved with increasing income; this serves to repay the accumulated debt.

The demographic influence is determined by looking at the dependent age group. Whilst the domestic saving ratio and the current account balance apparently fall as the share of dependent youth in the total population rises, an inverse relationship arises for the dependency ratio of the elderly population.[6] This is an interesting result, especially for Germany, as it implies that pensioners do not dissave in the expected manner: in fact, their growing share in the total population has likely contributed to the German current account surplus in recent years.

The fiscal balance is also a significant determinant of the current account. A rise in the fiscal deficit by 1% of GDP is estimated to reduce the current account balance by 0.1 percentage point. This helps to create "twin deficits", ie simultaneous current account deficits and fiscal deficits, and clearly illustrates that, in contrast to the theory of Ricardian equivalence, a rise in fiscal debt cannot be offset entirely by an adjustment of private saving.[7]

As expected, the influence of private investment is highly significant. A coefficient of 0.8 implies that part of the (increase or decrease in) investment is offset by a similar change in saving behaviour. However, this Feldstein-Horioka puzzle is not pronounced, indicating the high degree of financial integration within the EU.[8]

The explanatory value of the estimation is very high, with an $R^2$ of 0.96. However, this is partly due to fixed country effects, which do not provide any economically interpretable explanation for the dependent variable. The fixed effect for Germany is thus 6.6% of GDP, above the actual value of the current account balance in 2010 (5.7%). Furthermore, the AR terms required to correct the autocorrelation indicate a persistence of the current account balance without specifying the reasons more precisely.[9]

gration, Asymptotic and Finite Sample Properties of Pooled Time Series Tests with an Application to the PPP Hypothesis, Econometric Theory 20, pp 597-625 as well as C Kao (1999), Spurious Regression and Residual Based Tests for Cointegration in Panel Data, Journal of Econometrics 90, pp 1-44. — **5** See P O Gourinchas and O Jeanne (2007), Capital Flows to Developing Countries: the Allocation Puzzle, NBER Working Paper 13602. — **6** These mixed effects of the dependency ratios have also been determined in other empirical studies. See C Cheung, D Furceri and E Rusticelli (2010), Structural and Cyclical Factors behind Current Account Balances, Working Paper, 775, OECD. — **7** The same result is obtained by C Nickel and I Vansteenkiste (2008),

Fiscal Policies, the Current Account and Ricardian Equivalence, Working Paper 935, European Central Bank; and M Kumhof und D Laxton (2009), Fiscal Deficits and Current Account Deficits, Working Paper 237, International Monetary Fund. — **8** M Feldstein and C Horioka (1980), "Domestic Savings and International Capital Flows", Economic Journal, 90, pp 314-329. — **9** S Barnes, J Lawson and A Radziwill (2010), Current Account Imbalances in the Euro Area, OECD Working Paper, 826, also find that fundamental economic factors play a significant role in determining current account balances, but that they are not able to provide a sufficient explanation for the existing imbalances, in particular in the years before the crisis.

account surpluses (see the box on pages 50 and 51).[17]

The growth of the macroeconomic metrics in connection with the estimated coefficients can be used to derive an individual current account norm for each country. If longer-term data averages are used as the basis for the determinants of the current account, national reference values can then be derived.[18] Since the longer-term averages of the macroeconomic variables cannot always be classified as being in equilibrium, normative standards are another possible alternative. Examples include the budget balance benchmarks contained in the Stability and Growth Pact.

*Bundesbank panel estimate can explain half of the rise of Germany's current account position since 1999*

With respect to Germany, the variables included in the model can explain roughly half of the increase in Germany's current account position since the beginning of monetary union; from -1.2% of GDP in 1999 to 5.7% of GDP in 2010.[19] Demographic developments and the decline in private investment make the largest contribution to the change in the current account balance.

*Other factors also play a role*

Several other factors evidently play a key role as well.[20] Germany's current account position depends not only on events in Germany but also on factors in other countries. The global economic recovery starting in the spring of 2009, the great demand for capital goods (one of the German economy's particular strengths), the broad range of products and the presence of German firms in the fast-growing regions of central and eastern Europe, as well as in Asia, have benefited Ger-

man exports. In addition, price competitiveness increased gradually over many years, which likewise reflects wage and price moderation in Germany as well as considerably less favourable situations, particularly in some other euro-area countries.

Given these facts, the German current account surplus observed in the past few years has been influenced in part by special factors and is therefore likely to continue to recede in the future. All the same, a structural current account surplus is fundamentally justi-

*National particularities need to be taken into account*

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17 The influence of the oil balance shows the expected positive sign, but is not significant. This also applies to the GDP growth rate. See similar approaches to estimating structural current account balances such as M D Chinn and E S Prasad (2003), Medium term determinants of current accounts in industrial and developing countries: an empirical exploration, Journal of International Economics, 59, pp 47-76; M Bussière, M Fratzscher and G J Müller (2004), Current account dynamics in OECD and EU acceding countries – an intertemporal approach, Journal of Economic Integration, 21(3), pp 593-618; M Ca'Zorzi, A Chudik and A Dieppe (2009), op cit.
18 If the data averages from 1998 to 2008 are used as the basis for the determinants of current account movements, this would result, for instance, in a reference value for Germany of around 4% of GDP. According to the theory of the macroeconomic balance approach, differences between actual current account movements and the derived norm must, in and of themselves, be eliminated over the medium term by changes in the exchange rate. For euro-area countries, however, the (nominal) exchange rate trend depends on the situation of the euro area as a whole, which means that no direct relationship exists between deviations from the norm and the exchange rate.
19 For Italy and Spain, too, the estimate can also explain a considerable share of the change in current account balances (half for Italy and nearly all for Spain). For Greece and Portugal, the countries with the highest current account deficits, the rise during the period under review is only very slightly attributable (less than 10%) to the fundamental data integrated into the panel analysis. This could be interpreted as a sign of imbalance.
20 It is not possible to include all relevant variables in an econometric estimate. Rather, the idea is to specify the underlying model as accurately as possible; however, some aspects are not covered by the equation to be estimated. The panel analysis' residuals, ie any remaining unexplained fluctuations in the current account position, indicate that not all influencing factors have been included in the econometric estimates.

fied for Germany's economy, not least owing to the predictable demographic trends. In addition, the level of Germany's net external position (38.4% of GDP at end-2010) can very well be regarded as sustainable, which means that there is no cause for misgivings about a sustained German current account surplus from this angle, either.[21]

This example clearly highlights the need to follow up the results of formal and standardised procedures with a more in-depth analysis, all the more if economic policy conclusions are to be based on these analyses.

## Economic policy measures to correct current account positions: results of simulations

*Economic policy surveillance should not only identify divergences but help eradicate them*

Any considerable divergences of the indicators from the pre-defined benchmarks identified in the first stage of the early warning system have to be subjected to further examination in an in-depth country analysis in the next step. If any risks of serious imbalances developing have been recognised, concrete economic policy measures would need to be developed in order to restore sustainable external positions.[22]

*Economic policy reforms on the basis of the panel analysis …*

The preceding empirical studies showed that, in Germany, it was primarily demographic factors and relatively weak investment which were responsible for part of the increase in the current account balance since the beginning of monetary union. Over the past decade, in connection with the increasing ageing of society, the public has become more strongly aware of the need to save privately in order to maintain its standard of living in old age, which has impacted positively on household saving. Since the mid-1990s, private investment has trended only relatively moderately upwards. One reason is that the return to normal in housing construction following the reunification boom unfolded over a relatively long period of time. Another was that commercial real estate construction underwent restructuring processes with the goal of becoming more competitive in an increasingly competitive global environment and also of increasing the return on domestic investment. The main thrust of these structural adjustments is likely to be largely complete; however, regular recommendations by international bodies for strengthening the investment climate are aimed, in particular, at corporate investment.[23]

*… can be simulated*

Economic policy measures which can be derived directly from the identification of, or could be a response to, a high current account surplus were simulated to determine their impact on Germany's current account

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21 The calculations are based on the relationship between the external position and current account position according to G M Milesi-Ferretti and A Razin (1996), Current-account sustainability, Princeton Studies in International Finance, No 81, p 5.
22 Whereas all EU member states are required to strive to reduce imbalances, making adjustments is a matter of particular urgency for the euro-area member states, especially in cases of severe imbalances which jeopardise the smooth functioning of monetary union.
23 See eg IMF (2011), Germany: 2011 Article IV Consultation – Staff Report; Public Information Notice on the Executive Board Discussion; and Statement by the Executive Director for Germany, Country Report No 11/168.

## NiGEM simulations of the impact of economic policy measures on the current account *⁾

Under the European surveillance framework, an in-depth country analysis is conducted in order to investigate individual current account levels that exceed or fall below certain thresholds. Where risks of emerging imbalances are identified, concrete economic policy measures to bring external positions back to sustainable paths should be recommended.

As a general rule, governments are unable to directly influence all the measures that could be implemented. Nevertheless, to a certain extent, action on their part can put in place a basic framework which sets incentives aimed at modifying behaviour in the desired manner. In this box, a sample of the economic policy interventions presently under discussion, which are derived from empirical contexts, will be simulated in order to identify their workings. The analysis will focus on the timeline and extent of the effects on the German current account. Moreover, the spillover effects on the external balances of other economies are also examined.

Specifically, the effects of an increase in the retirement age and in labour force participation as well as a reduction in corporate taxation to the average level prevailing in the euro area[1] are examined.

The simulations, which were conducted using NiGEM Version 2.11, assume rational expectations with regard to wages, interest rates, exchange rates, share prices and inflation. They presuppose myopic consumers and a (modelled) two-pillar monetary strategy of the Eurosystem.

In each case, the shock period is 10 years, during which time the variables in question are influenced exogenously. This means that any repercussions which might arise from the response of the economic environment are disregarded. Not until the simulated exogenous influence has run its course do market forces unfold fully again. As a rule, the shocked variable does not revert to those values assumed by NiGEM in the baseline scenario; instead, there is a strong possibility that it will continue to differ from them long after the simulated economic policy intervention has come to a close.

Since wage negotiations and the financial markets are assumed to be subject to rational expectations, some responses which do not occur until the actual shock period is over can also affect the impact of policy measures. For this reason, the simulation results are calculated over an 18-year timeframe, which is much longer than the actual period under review.

The simulations largely confirm the results derived from the empirical panel analysis, which are presented on pages 50 and 51. For instance, economic policy measures that are connected with demographic developments or which represent a political response to demographic changes appear to have a long-term impact on the German current account balance. Reforms which extend average working lives through an increase in the retirement age or which lead to higher labour force participation will tend to reduce the German current account surplus owing to rising demand for investment and consumption.

Moreover, it is also evident that measures aimed at stoking private investment directly are to some extent taking hold. Lowering profit-dependent corporate taxes to the average level for the euro area would cause the current account balance to contract on account of rising investment demand.

The smoothest results over time can apparently be obtained by a combination of the presented measures, as this evens out the individual time lags with which they take effect. It follows that, in principle, the best tool for eliminating internal and external imbalances would be a coherent and consistent economic policy that can be applied in multiple areas.

The spillover to other euro-area countries that would result from the economic policy measures under examination is extremely moderate. Since such transmission generally spreads to numerous economies, Germany is constrained in its ability to eliminate imbalances at both the euro-area and global level. The results thus particularly emphasise the individual responsibility of the deficit countries for eradicating their external imbalances.

A variety of alternative scenarios based on changes to assumptions shall serve as a sensitivity analysis of the above simulation results. For example, if the baseline scenario's assumption of rational expectations is replaced with the assumption of consumer myopia, most variables generally end up reacting to the simulated policy measures with a certain time lag. The basic

impacts, however, are broadly comparable, and the magnitude of these effects is affected only minimally by the adjusted NiGEM simulations.
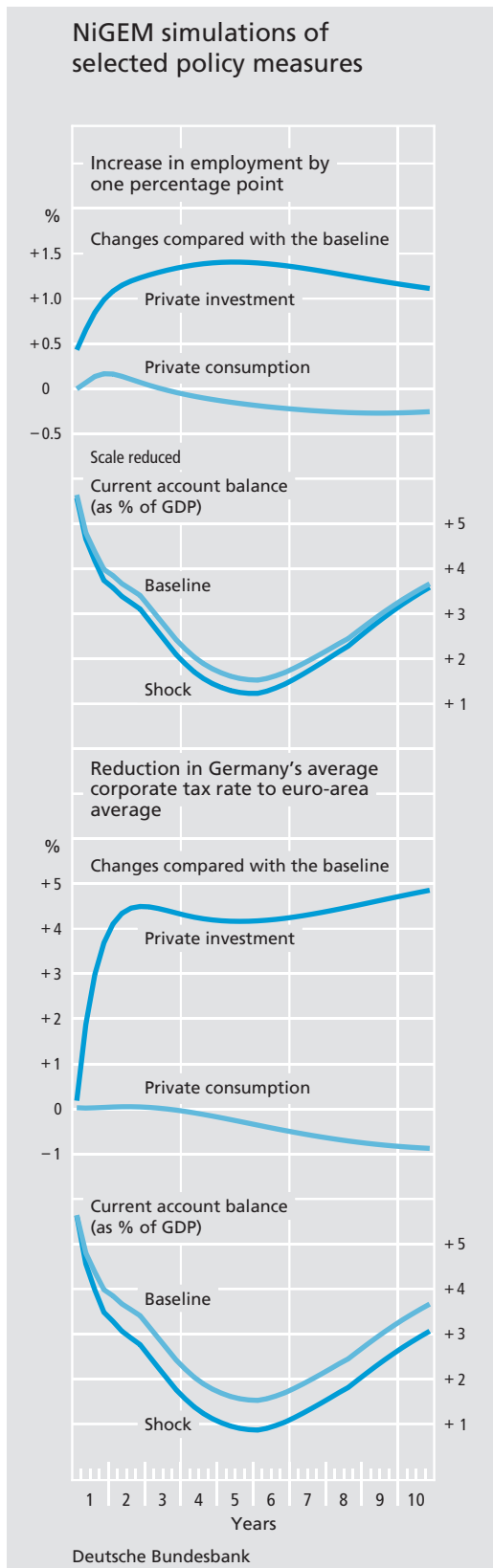
Ultimately, it is important to note that the results yielded by the projections for Germany cannot be automatically applied to other countries. All of the OECD countries (excepting Turkey, Iceland, Luxembourg and Chile) are modelled separately using between 60 and 130 single equations and the parameters for each country are estimated individually. Moreover, differences in baseline situations, eg with respect to public debt, employment figures or interest rates, can affect the impact of policy measures.

As with the empirical estimates, the NiGEM simulation results are complicated by the challenge of forging economic policy recommendations to correct current account balances. In this context, there is evidence of considerable lags or of effects on internal and external variables reversing themselves over time.

This makes it difficult to determine in what cyclical environment the effects occur and the extent to which measures can be described as efficient. To all intents and purposes, the current account constitutes a residual rather than a policy variable that can be influenced by government action. Furthermore, the fact that the actual effects are limited gives cause to question whether economic policy measures can, in fact, influence the path of the current account.

Reforms and International Tax Competition, Economic Policy 35, 451-495, as well as Devereux, M P and R Griffith (2003), Evaluating Tax

Policy, Decisions, International Tax and Public Finance 10, 107-126. See also http://www.ifs.org.uk/publications/3210

## NiGEM simulations of selected policy measures

Increase in employment by one percentage point

Changes compared with the baseline

%

+1.5

+1.0    Private investment

+0.5

0       Private consumption

−0.5

Scale reduced

Current account balance (as % of GDP)

+5

+4

Baseline

+3

+2

Shock
+1

Reduction in Germany's average corporate tax rate to euro-area average

%

Changes compared with the baseline

+5

+4    Private investment

+3

+2

+1

Private consumption

0

−1

Current account balance (as % of GDP)

+5

+4

Baseline
+3

+2

Shock
+1

1  2  3  4  5  6  7  8  9  10
Years

Deutsche Bundesbank

balance (see the box on pages 54 and 55).[24] The primary purpose is to assess whether the simulated policy interventions would be fundamentally capable of contributing to a perceptible reduction in the existing surplus. Moreover, potential spillovers need to be taken into account – in other words, we need to examine how changes to the German current account are transmitted to other countries' external balances, or whether measures in Germany indirectly promote the reduction of imbalances elsewhere.

On the whole, measures relating to demographic developments do show up in the current account; however, the impact is mostly moderate. For instance, if it were possible to increase employment among the elderly by 1% by raising the retirement age, private consumption would rise only temporarily, and only marginally, by not more than 0.05%. The demand for private investment, after an initial decline, would rise by the same extent in the medium term. On the whole, the permanent reduction in the current account balance, at around 0.05% of GDP, would be negligible.

*Demographic changes …*

24 Structural reforms, such as deregulation of credit or product markets or in the services sector, but also tax and labour market policy measures are generally not conducted in order to reduce external imbalances but chiefly for domestic motives. They then appear to be relatively unproblematic if their purpose is to sustainably improve the supply conditions of the German economy. However, such measures can also affect current account balances. In this respect, however, empirical studies yield varying results. For more see A Ivanova (2011), Current account imbalances: Can structural policies make a difference?, Working Paper, International Monetary Fund, forthcoming; L Vogel (2011), Structural reforms and external rebalancing in the euro area: a model-based analysis, European Economy, Economic Paper, 443, European Commission; OECD (2011), Tackling current account imbalances: Is there a role for structural policies?, Economic Policy Reforms 2011, Going for Growth.

A general increase in labour force participation would operate in a similar manner but would be more broadly based and thus have a more forceful impact. According to the simulations, increasing labour force participation by 1% would cause firms' investment demand to rise by up to 1.4%. By contrast, the impact of an increase in private consumption would also only be temporary, since the increase in the labour supply would put significant pressure on nominal wages. In terms of the external effect, a reduction in the current account surplus by around 0.3% of GDP would be expected after three years.

*… or reforms in corporate taxation …*

The relative weakness of private investment activity in Germany in the past few years has frequently been seen by international organisations as a key indicator of German current account growth.[25] We study the effect of a reduction in profit-related taxes in line with economic policy conclusions: for example, by reducing the tax rate on corporate profits from its current level of around 26% to the euro-area average rate of 21.8%. Using the simulations conducted would lead to a considerable increase in private investment by up to 5%; the attendant reduction in the current account balance would remain relatively constant at around 0.6% of GDP during the simulation period.

*… have a limited impact on the current account position*

According to the simulations, the smoothest effects over time can be achieved by a combination of the measures presented earlier, since the differences over time in the workings of the individual mechanisms partly cancel each other out. They would lead to a sustained reduction in Germany's current ac-

count balance of close to 1% of GDP. Private investment demand, in particular, would benefit from such a package of measures. On the whole, however, the quantifiable effects for Germany, based on the simulations, may be described as moderate.

What the simulations also clearly show is that these already moderate effects of the aforementioned economic policy measures on Germany's current account would make themselves felt only marginally in other European economies' external balances. The spillovers caused by the induced economic policy measures, in terms of their volumes – apart from some temporary volatility – are virtually negligible. This confirms recent studies by IMF staff and, in the light of the high regional and also sectoral diversification of Germany's external relationships, is not particularly surprising.[26]

Finally, we must point out that the measures studied should not be interpreted as specific economic policy reform proposals since some of these areas cannot be directly influenced by economic policy. Generally, politicians can favour these measures in the long run, if at all, by making adjustments in the incentive system. It must be noted, moreover, that the presented corrections cannot be implemented in isolation. For instance, economic

*However, measures should not be interpreted as specific policy recommendations*

**25** IMF (2011), Germany: 2011 Article IV Consultation – Staff Report, op cit.
**26** See IMF (2011), Germany: 2011 Article IV Consultation – Staff Report, loc cit. The IMF, in its spillover reports, stresses the need for international cooperation, yet the calculated spillover effects are often only marginal. Above all, the significance of trade channels seems to have been strongly superseded by that of financial channels (www.imf.org/external/pubs/ft/survey/so/2011/CAR090211B.htm).

*The current account position ultimately remains a residual*

policy decision-makers cannot lose sight of the impact that a fiscally relevant measure would have on the general government budget.

The current account is ultimately an indicator variable and not a policy variable that can be manipulated at will by government actions. Rather, it is very much the result of individual decisions taken by agents both in Germany and abroad. Thus, the calculated deviations from the benchmarks only provide indications of potential unsound structural developments. Economic policy measures must be oriented to "underlying" variables and not to the current account itself, which is ultimately a residual. However, the high uncertainty surrounding the drivers of current account developments shows that macroeconomic fine-tuning is not appropriate and should consequently be avoided.

## Conclusion

Efforts towards increased economic policy surveillance within the EU and in the G20 context require an intensive analysis of sustainable external positions. Benchmarks for current account balances are likely to play an important role in both processes in future. An early warning system is being planned in order to examine economies using a small set of macroeconomic variables to flag potential internal imbalances, but also, and in particular, external divergences.

Although statistical and econometric procedures contribute to the identification of initial

signs of imbalances in the context of an early warning mechanism, they need to be interpreted in economic terms. Signs of any potential need for adjustment are then to be examined in more detail in an in-depth country analysis. Above and beyond a stocktake of potential imbalances, a further goal of international efforts is, if significant risks exist, to issue economic policy recommendations to the affected economies and to make efforts to ensure compliance with these recommendations.

This aim is fundamentally welcome in the light of the severe global turmoil that macroeconomic imbalances can trigger. That said, however, the above expositions suggest that the concept of economic policy surveillance should be used cautiously, as the sustainability of external positions cannot unreservedly be captured by empirically determined benchmark values. Studies based on past experience ultimately provide no guarantee of being able to warn reliably of future threats. Moreover, there are also potential problems associated with the reduction of identified imbalances. One example for Germany shows why this is the case. Although suitable economic policy reforms are, in principle, capable of affecting decisions on saving or investing, their effect on the current account is only moderate, and detailed impacts are difficult to forecast. This is also true of the spillovers of these measures to other European countries.

Ultimately, the current account balance is not an independent policy target but instead the result of numerous, largely private-sector de-

cisions at home and abroad. It is therefore beyond the direct control of economic policy-makers. Against this background, economic intervention should be permitted to occur only in the event of severe unsound developments which could also spill over significantly to other economies; excessive debt is one pri-mary example of such a development. However, macroeconomic fine-tuning should be avoided because of the high diagnostic uncertainty, limitations to the ability to manipulate external positions and the variable time-lags of policy measures.