

II. Special topics on the euro-area economy

Persistent, large current account deficits in some euro-area Member States are a cause for concern. A durable correction of these imbalances is of great importance for the functioning of the economy of the euro area. The first section in this chapter looks at a large sample of past episodes of rebalancing of current account deficits in advanced economies. It draws some preliminary conclusions on the patterns and factors shaping adjustment episodes. It concludes that the corporate sector played an essential role in the correction of external imbalance and that flexibility in prices, wages and exchange rates, including in the non-tradable part of the economy, helped to make adjustment more sustainable and less costly in terms of GDP growth and unemployment. There is also evidence that, in many cases, the burden of the adjustment fell primarily on investment, thereby hampering potential growth. In episodes that took place under fixed exchange rate arrangements, price and wage flexibility was usually not high enough to compensate for the lack of nominal exchange rate adjustment, leading to losses in competitiveness. This is probably one of the main explanations for the weaker developments in GDP and employment observed in those episodes relative to the broader sample.

In July, a joint mission by the European Commission, the ECB and the IMF concluded that the Greek government's economic adjustment programme had made a strong start led by vigorous implementation of the fiscal programme and impressive structural reforms. However, important challenges remained, in particular regarding the country's external imbalances. To shed some light on these external imbalances, the second section in this chapter looks at the Greek export sector on the basis of industry and firm-level data. To reduce its current account deficit, Greece needs to redirect a significant part of its output from the domestic sector to exports. This will require protracted efforts to reverse some of the past losses in price competitiveness and to boost non-price competitiveness. However, an analysis of firm-level data shows that the Greek export sector presents some structural features that could facilitate this process. In particular, most Greek firms export some of their output. The share of output exported is generally low but firms with an existing export base can contribute more easily and more rapidly to boosting total exports than firms that have never exported. Raising the quantity sold through an established foreign distribution network is indeed less costly than entering new markets. Overall, this suggests that future efforts to restore competitiveness could pay off relatively rapidly in terms of boosting Greece's export performance.

The final section presents a quantitative assessment of imbalances on housing markets based on estimations of equilibrium house prices and price-to-rent ratios. According to estimations of equilibrium house prices, the overvaluation of house prices in the euro area was approximately half of that of the US at the end of 2008, with the two regions experiencing similar price drops during 2009. There are, however, significant differences across Member States. By the end of 2009, the house-price correction was quite advanced, especially in the Netherlands, France and Ireland. At the other end of the spectrum, German house prices are an outlier as they appear to be slightly undervalued. Cyclical deviations of price-to-rent ratios from their long-term trends confirm these econometric results.

II.1. A look at past episodes of adjustment to current account deficits

Large and persistent current account deficits in some euro-area Member States are a cause for concern. They are a manifestation of domestic imbalances that have built up in pre-crisis years.⁽²¹⁾ They have increased the vulnerability of euro-area economies, which was brutally exposed by the crisis. The crisis has triggered the beginning of a current account rebalancing in some of the Member States concerned. It is of great importance for the euro-area economy that the adjustment process continues, expands to all

the countries concerned and leads to a durable correction of external imbalances.

In order to better understand the macroeconomic consequences of rebalancing processes, this section offers a first look into a wide sample of episodes of rebalancing of current account deficits in industrialised economies.

More specifically, the analysis is based on a sample of adjustment episodes that took place in 23 industrialised economies during the period 1970-2009 (for more information on methodology and data see Box II.1.1). Developments in a broad range of macroeconomic variables around the time of the adjustment are averaged across the episodes to identify typical adjustment patterns.

⁽²¹⁾ European Commission (2010), Surveillance of intra-euro-area competitiveness and imbalances, European Economy No 1.

The initial sample of episodes is then broken down into sub-samples to identify specific features present in specific adjustment episodes.

In the economic literature, a number of studies have adopted a similar approach to study current account rebalancing. ⁽²²⁾ This strand of research was initially centred on emerging markets. However, with the build-up of current account imbalances in advanced economies, its focus has recently been extended to industrial economies. Overall, this literature has addressed a range of questions related to current account adjustment. Nevertheless, some issues that are particularly relevant for euro-area Member States may not have received sufficient attention. In particular, the present analysis endeavours to shed some light on the effect of adjustment on GDP growth and unemployment, the role of price and wage flexibility and differences between fixed and flexible exchange rate regimes. The issue of the sustainability of the adjustment, which has been largely ignored in the literature, is also discussed.

A typical episode of current account adjustment involves the domestic side of the economy ...

Based on the criteria set out in Box II.1.1, the base sample of episodes contains 44 episodes of adjustments to current account deficits (labelled ‘All episodes’ in the charts). The base sample is also divided into two smaller sub-samples (“Sustainable episodes” and “Growth friendly episodes” in the charts) to study episodes of sustainable current account rebalancing and more growth-friendly adjustments (see Box II.1.1 for details).

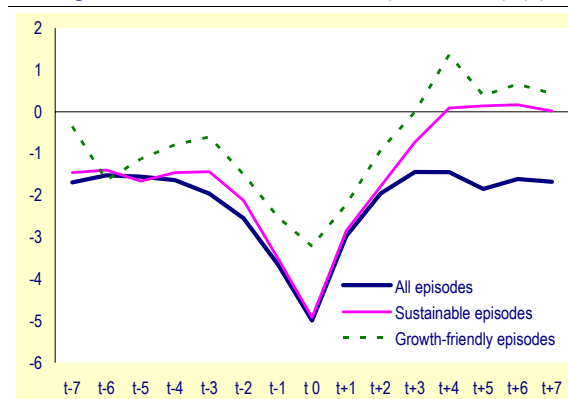
Looking first into the base sample (other sub-samples will be discussed later), on average, the current account starts to adjust when the deficit reaches 5% of GDP (the trough year) (Graph II.1.1). This improvement in the current account is an outcome of an adjustment taking place on both the domestic and the external side of the economy.

From an accounting point of view, the current account can be viewed as the saving-investment balance of the economy. Therefore, the current account can improve either via a fall in investment and/or via an increase in savings. Both effects are visible in the base sample, but the

effect of falling investment dominates (Graph II.1.2). While investment drops sharply already in the first year of adjustment, savings take more time to adjust and the saving rate starts increasing only in the third year (Graph II.1.3).

The total current account (i.e. the net lending or borrowing position of the economy or NLB) is the sum of saving and investment decisions by the main institutional sectors, namely households, corporations and the general government sector. Therefore, the adjustment of the total current account can be broken down into sectoral contributions. ⁽²³⁾ This breakdown shows that, on average in the sample, the improvement in the external position is mainly due to the corporate sector, where the NLB increases sharply in the first two years of the adjustment episode (Graph II.1.4). The household sector seems to contribute more to the phase of deterioration of the current account than to its improvement. The government sector, on the other hand, plays a moderately offsetting role. While its contribution to the build-up of the current account deficit is very small, when the adjustment starts, government balances deteriorate, moderating the impact of the private sector’s adjustment on growth and the external position.

Graph II.1.1: Current account (% of GDP) (1)



(1) Based on adjustment episodes in 23 industrialised economies during the period 1970-2009. See Box II.1.1 for a definition of the different samples.

Source: Commission services.

The balance sheet adjustment by the private sector has visible negative effects on domestic demand. On average, demand starts slowing down already in the year of the current account trough and shrinks slightly in the first year of adjustment.

⁽²²⁾ For a review of the literature see Algieri, B. and T. Bracke (2007) ‘Patterns of current account adjustments — insights from past experience’, *CESifo Working Paper*, No 2029.

⁽²³⁾ Due to data limitations the sectoral breakdown into corporations, households and general government is limited to 13 cases for which data are available for all sectors for 10 years around the adjustment.

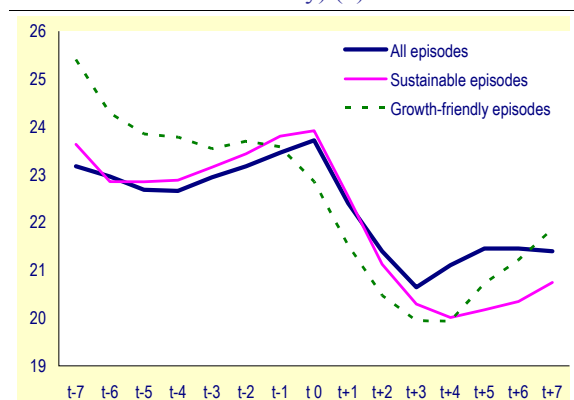
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Consistent with the larger role of corporations in adjustment, investment, which contracts by 3% in the first year, is the main driver of the weakening of domestic demand. Consumption slows down as well (a deceleration which actually starts before the current account adjustment) but is less affected than investment.

... as well as the external sector ...

The average episode also points to a significant contribution of exports to the rebalancing process. Exports, which due to moderating foreign demand had been slowing down gradually before the adjustment, pick up again in the adjustment phase. The acceleration of exports is linked to increases in market shares, with world trade moderating further during the adjustment phase. The surge in exports and market shares is due to improving price competitiveness. Various measures of the real exchange rates show an improvement which starts already two years before the trough in current account. Although competitiveness gains are partly explained by a depreciating nominal exchange rate, they also reflect substantial wage moderation: nominal wages moderate sharply at the beginning of the adjustment process (Graph II.1.5). Real wages adjust as well. An increase in inflation, probably induced by nominal depreciation, leads to a virtual freeze of real wages in the first two years of adjustment.

Graph II.1.2: **Investment rate** (% of GDP, total economy) (1)



(1) Based on adjustment episodes in 23 industrialised economies during the period 1970-2009. See Box II.1.1 for a definition of the different samples.

Source: Commission services.

Adjusting to current account deficits is usually costly ...

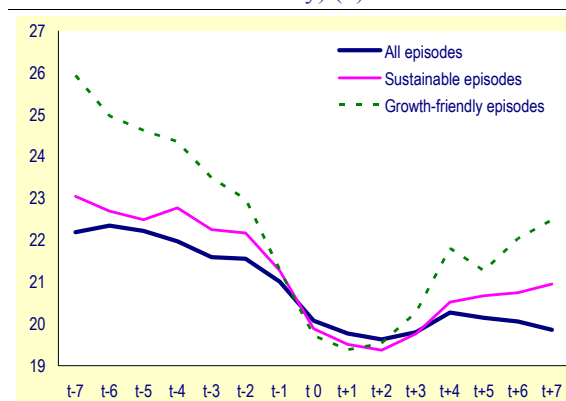
All in all, these developments on the domestic and external side of the economy visible in the base sample show that the average current account

adjustment bears costs in terms of growth and employment. On average in the sample, GDP growth moderates slightly already before the adjustment starts, slows down sharply in the first year and recovers only after three years (Graph II.1.6). Similarly, the output gap, which is still slightly positive in the year of the current account trough, turns negative in the first year of the adjustment. The gap widens further and reaches the level of almost 2% of potential output in the third adjustment year, before slowly closing. Falling GDP growth has a visible negative impact on unemployment, which increases by 2 pp in the first three years.

... and is not always sustainable

The typical pattern of current account adjustment has a worrying feature. The current account improves for three consecutive years, and after remaining flat for one year, relapses slightly. The relapse is small but the large sample hides large variations. In around a quarter of the episodes, the current account starts to deteriorate again in the third year and in the fifth reaches on average the same level as in the trough year. As improving the functioning of EMU requires a sustainable correction of external imbalances, a new sub-sample was built comprising 27 episodes of sustainable adjustment (see Box II.1.1 for details).

Graph II.1.3: **Saving rate** (% of GDP, total economy) (1)



(1) Based on adjustment episodes in 23 industrialised economies during the period 1970-2009. See Box II.1.1 for a definition of the different samples.

Source: Commission services.

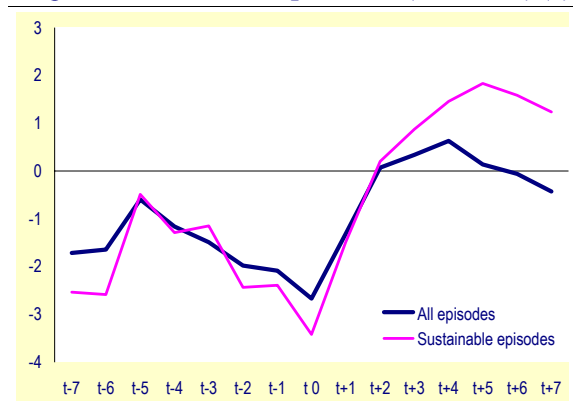
Sustainable adjustments are larger ...

A comparison of the base sample ('all episodes') with the sustainable episodes reveals interesting patterns. First, the size of the current account imbalance is the same in both samples (Graph II.1.1). This suggests that a deficit of a

given size can be corrected in either a sustainable or a non-sustainable way. Second, in episodes of sustainable rebalancing, the improvement of the current account is larger.

Larger adjustment is visible on both the domestic and the external side. On the domestic side the additional adjustment is mainly due to sharper and more prolonged weakening of domestic demand with investment playing a central role (Graph II.1.2). In contrast, savings fall even slightly more during the first two years of the adjustment than in the base sample (Graph II.1.3). However, after the initial fall, savings recover and, unlike the base scenario, continue rising, contributing to the sustainability of the current account adjustment. The central role of the corporate sector is even further strengthened here, with households and the government sector maintaining patterns similar to those in the base sample.

Graph II.1.4: NLB of corporations (% of GDP) (1)



(1) Based on adjustment episodes in 23 industrialised economies during the period 1970-2009. See Box II.1.1 for a definition of the different samples.

Source: Commission services.

The external sector also behaves differently in sustainable cases of rebalancing, notably in the later stages of the adjustment process. In the third and fourth year of the adjustment, exports grow visibly faster than in the base sample, suggesting a key role in securing the sustainability of the adjustment. The difference in export patterns can be explained by additional gains in competitiveness in the sustainable cases, with all measures of the real exchange rate depreciating more sharply and more durably than in the base sample. The nominal exchange rate plays a role in this pattern, but domestic prices and wages seem to adjust more as well. Wages moderate faster and

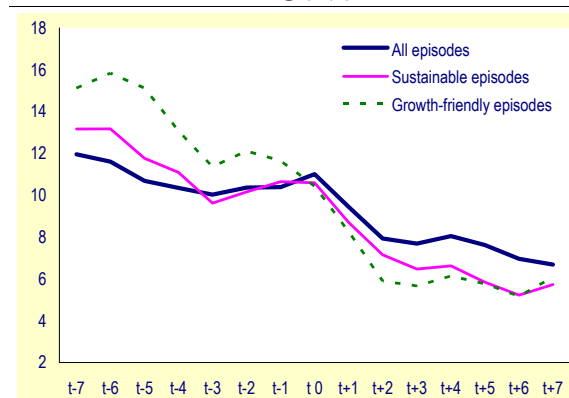
more strongly than in the base sample. After five years of adjustment, sustainable episodes record more than 1 pp of additional wage moderation compared to all the episodes. Real wages also moderate more significantly.

Finally, the comparison of the two samples of episodes also suggests that sustainable current account adjustments tend to have some additional costs in terms of GDP, even if the gap in growth ultimately closes. The impact on unemployment is also larger. After four years of adjustment the unemployment rate is a half percent higher than in the base sample.

... but vary in terms of growth effects

This average growth picture hides, however, a substantial degree of heterogeneity. The 27 episodes of sustainable adjustment show large differences in the impact on GDP growth. Comparing average GDP growth five years before and after the beginning of the adjustment, the growth performance during adjustment episodes ranges from an acceleration of 2.2 pp to a sharp drop of 5.3 pp. There are a few clear outliers in the sample. The cases of large losses in GDP are mainly episodes of adjustment to very large current account deficits, such as in Portugal (1982), New Zealand (1974, 1985) or Ireland (1981). This suggests that adjustments to very large imbalances are generally related to significant GDP slowdowns. Nevertheless, even after removing these outliers from the sample, the dispersion in GDP impact remains significant.

Graph II.1.5: Nominal wages (annual % change) (1)



(1) Based on adjustment episodes in 23 industrialised economies during the period 1970-2009. See Box II.1.1 for a definition of the different samples.

Source: Commission services.

Box II.1.1: Current account adjustment — An analysis of past episodes in industrialised countries

Episodes of current account adjustment used in this section were identified on the basis of the following joint criteria:

- the current account level in the trough year (t_0) is equal to or lower than -1 % of GDP;
- the current account improves by at least 1.5 % of GDP in three years;
- the current account improvement in the first year of adjustment (t_1) is larger than 0.5 % of GDP;
- the current account level in the second year (t_2) is above its initial level (t_0);
- the troughs in the current account between two successive episodes have to be separated by at least four years.

Based on these criteria a first sample of 44 episodes was identified ('all episodes'). To identify episodes of sustainable adjustment, an additional criterion was included, requiring the initial adjustment (minimum 1.5%) to be maintained for at least the next two years. On the basis of this additional criterion, a sample of 27 'sustainable episodes' was created. Finally, the sample of episodes in fixed exchange rate systems was selected from the base sample using the *de facto* classification of exchange rate systems of Reinhart and Rogoff (2002).⁽¹⁾ However, if during the period of three years before or after the trough year (t_0) a realignment (in cases of formal fixed exchange rate arrangements) or significant nominal adjustment (in cases of *de facto* arrangements) took place, the episode was removed from the sample. This procedure initially led to a sample containing 10 episodes, which was reduced to 9 after removing an outlier (Greece 2002). Current account adjustment episodes identified in the above samples were then mapped to other economic variables in order to analyse their behaviour during the period of adjustment.

Data used here come from the Commission's AMECO database. The sample covers 23 industrial countries (AT, AU, BE, CA, CH, CY, DE, DK, EL, ES, FI, FR, HK, IE, IT, JP, LU, NL, NZ, PT, SE, UK, US). The current account is defined as the net lending/borrowing of the total economy, supplemented with the balance on current transactions if the former is not available.

⁽¹⁾ Reinhart, C.M. and K.S. Rogoff (2002), 'The modern history of exchange rate arrangements: a reinterpretation', *National Bureau of Economic Research Working Paper*, No 8963.

To check the factors influencing the differences in GDP effects of sustainable current account adjustments, the 7 best cases were grouped into a separate 'growth-friendly' sub-sample. The comparison of the 7 best cases with the rest of the sustainable episodes (less the outliers mentioned above) shows that the pattern of current account in the two sub-samples is virtually the same. In other words, apart from the case of very large deficits, the size of the current account imbalance does not seem to determine its GDP effects.

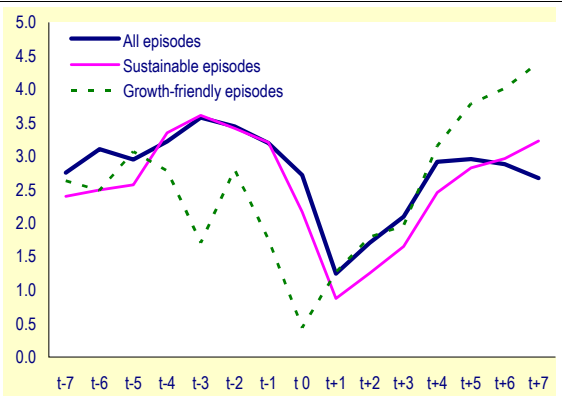
Two additional interesting features in this sub-sample of growth-friendly episodes should be mentioned. The first is the behaviour of savings and investment. In the growth-friendly cases, the burden of adjusting the savings-investment ratio is clearly shifted towards savings, which rebound sharply after the first year of adjustment (Graph II.1.3).⁽²⁴⁾ At the same time, the

investment rate recovers, providing support for medium-term growth and potential output. The second feature worthy of attention is the role of wages and prices in the growth-friendly adjustment. The comparison of the samples confirms the common finding of the literature, namely that real depreciation helps mitigate the negative impact of current account adjustment on growth.

However, the literature remains silent on the sources of this depreciation during adjustment episodes. The growth-friendly sample identified here shows that the improvement in competitiveness is partly related to the nominal exchange rate depreciation, but domestic price adjustments also play an important role in the episodes of growth-friendly current account adjustments. The size of wage moderation in this sample is indeed impressive (Graph II.1.5). Real wages also moderate strongly. Wage moderation helps to gain external competitiveness, which boosts exports.

⁽²⁴⁾ Saving ratio falls also more sharply than in other samples before the adjustment and the link between pre- and post-adjustment behaviour of savings would have to be investigated further.

Graph II.1.6: GDP growth (annual % change) (1)

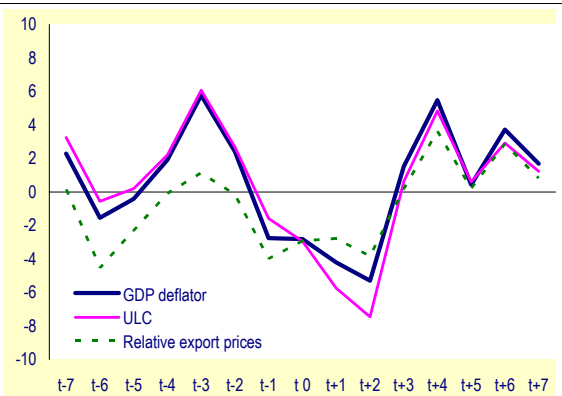


(1) Based on adjustment episodes in 23 industrialised economies during the period 1970-2009. See Box II.1.1 for a definition of the different samples.

Source: Commission services.

Moreover, the growth-friendly episodes exhibit relatively large differences (compared to other episodes) in the developments of various measures of the real exchange rate (Graph II.1.7). Specifically, broader measures (based on GDP deflator or unit labour costs) depreciate more than the export price-based measure. The broad measures are based on costs and prices of both the tradable and non-tradable sectors, while the export-price measure covers only the tradable sector.

Graph II.1.7: Real effective exchange rate developments in growth-friendly adjustment episodes (annual % change) (1)



(1) Real effective exchange rate deflated by the GDP deflator, unit labour costs and export prices.

Source: Commission services.

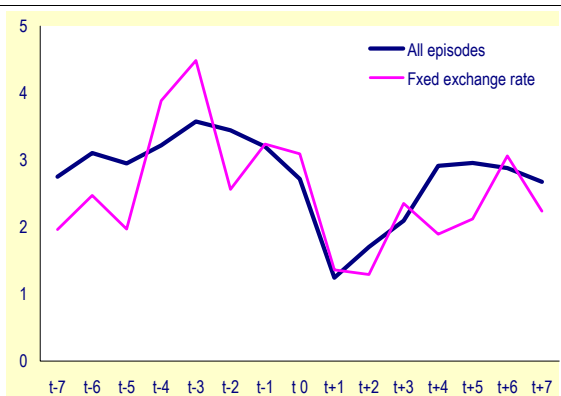
Different developments in the two types of measures of real effective exchange rate can be interpreted as changes in relative prices of tradables and non-tradables. Larger depreciation in broad measures of real effective exchange rate suggests that growth-friendly episodes involve also more downward adjustment in the relative

prices of non-tradables, pointing to the potentially important role of the non-tradable sector in rebalancing processes. ⁽²⁵⁾

What about current account rebalancing in fixed exchange rate regimes?

In general, nominal exchange rates seem to have played a role in the adjustment episodes analysed above, even if changes in domestic prices were also important. In order to draw conclusions more relevant for the euro area, it can be useful to investigate in more detail the role of nominal exchange rate flexibility in adjustment episodes. For that purpose, episodes taking place in fixed exchange rate systems were selected from the base sample and grouped into a new sub-sample (see Box II.1.1). The sample is, however, very small (9 episodes) and conclusions derived from these data should be interpreted with caution.

Graph II.1.8: GDP growth (annual % change) (1)



(1) Based on adjustment episodes in 23 industrialised economies during the period 1970-2009. See Box II.1.1 for a definition of the different samples.

Source: Commission services.

Two features of past adjustments in fixed exchange rate regimes emerge from this exercise. First, without the help of nominal exchange-rate depreciation, external price competitiveness does not improve and even deteriorates somewhat if broader real exchange rate measures are looked at. Nominal wages moderate eventually but with a

⁽²⁵⁾ Narrow measures of the real exchange rate are based on price or cost indices restricted to the tradable sector, while broad measures cover both the tradable and the non-tradable sector. Broad measures can thus be broken down into components capturing the price or cost competitiveness of the tradable sector and of the non-tradable sector. For a discussion of the role of the tradable and the non-tradable sectors in current account fluctuations, see Ruscher, E. and G.B. Wolff (2009), 'External rebalancing is not just an exporters' story: real exchange rates, the non-tradable sector and the euro', *European Economy — Economic Papers*, No 375.

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significant time lag. As a consequence, and in contrast to the base sample, exports do not contribute to the adjustment and remain broadly flat during the adjustment phase.

Second, GDP appears more negatively affected by the adjustment in episodes with fixed exchange rate systems than in the broader sample (Graph II.1.88). Similarly, the increase in unemployment is larger and in the fifth year of adjustment the unemployment rate is half a percentage point higher than in the base sample. More in-depth analysis would obviously be needed to take into account other possible differences between fixed exchange rate cases and other episodes. But the data a priori suggest that insufficient competitiveness adjustment is probably a key explanation of the weaker growth performance in fixed exchange rate arrangements during rebalancing periods. Indeed, various checks indicate that the weaker growth cannot be ascribed to monetary policy (which is generally looser during adjustment periods in fixed exchange rate episodes than in the broader sample where nominal depreciation fuels inflation and forces monetary authorities to step in) or differences in long-term interest rates.

Conclusions

This short review of past episodes of current account adjustment allows some preliminary, but important lessons to be drawn for the ongoing current account adjustment in the euro area.

First, it emphasises the critical role of balance sheet adjustment in the private sector and especially in the corporate sector. With much of the burden of adjustment falling on investment, current account rebalancing poses risks for potential growth.

Second, it shows the importance of flexibility in domestic costs and prices, which helps to improve external competitiveness, achieve sustainable current account adjustment and reduce its impact on growth. Flexibility concerns the prices of both traded and non-traded goods and services. In particular, the role of adjustment in the prices of non-tradables should not be underestimated. Moreover, the analysis shows that wage flexibility has a distinct role in adjustment episodes and plays an especially important role in moderating the impact of adjustment on growth.

Third, the patterns visible in the episodes taking place in the fixed exchange rate regimes are a warning signal for the euro area. They confirm that in the absence of nominal exchange rate flexibility, rigidities in domestic costs and prices can be harmful for GDP growth and employment. For the Member States facing large current account adjustments, these findings underscore the urgent need for wage moderation and gains in competitiveness and, more generally, for reforms aimed at increasing the flexibility of the economy.⁽²⁶⁾

Finally, adjustments of current account deficits often bear costs in terms of growth and are not always sustainable.

The above observations drawn from past experiences of current account adjustments are a strong argument for closely monitoring current accounts with a view to avoiding the re-emergence of imbalances in the future. They underline the importance of putting in place a structured framework to monitor and address macroeconomic imbalances, including large current accounts deficits, in the euro area and the EU as proposed by the Commission in its legislative package of 29 September.

⁽²⁶⁾ For empirical evidence on the link between structural reforms and adjustment capacity see Biroli, P, G. Mourre and A. Turrini (2010), 'Adjustment in the euro area and regulation of product and labour markets: an empirical assessment', *CEPR Discussion Paper*, No. 8010.