



On German External Imbalances

Stefano Micossi, Alexandra D'Onofrio and Fabrizia Peirce

Summary

This paper describes four features of the German economy which lie at the root of its external imbalances: the evolution of its real exchange rate; the underlying trends in productivity and unit labour costs; the persistent shortfall of investment relative to domestic savings; and the deployment of much of the current external surplus in portfolio investments outside the euro area.

The euro has helped Germany maintain a strong competitive position for its exports within the euro area and has helped moderate the appreciation of its exchange rate vis-à-vis the main third-country currencies. Moreover, the currency union has eliminated much of the pressure on Germany to adjust its burgeoning external surplus, since capital inflows no longer affect its monetary base creation.

The export strength of German manufacturing has been built, on one hand, upon a rate of growth in productivity in manufacturing, which even if declining has been almost constantly higher than that of its European partners; on the other hand, upon a remarkable measure of wage restraint. The analysis of sectoral balances between savings and investment shows that the enormous increase in Germany's current external surplus in the euro years was determined by rising profits and low investment in the corporate sector, and by the shift of the public sector budget from deficit to surplus. Increased savings by the household sector do not contribute to the explanation of the surplus, contradicting the view whereby the surplus was the result of higher savings by an ageing population.

Finally, the analysis of the capital account of the balance of payments shows that Germany has contributed neither to real investments within the euro nor to sharing the risks implicit in an incomplete monetary union with divergent national fiscal policies.



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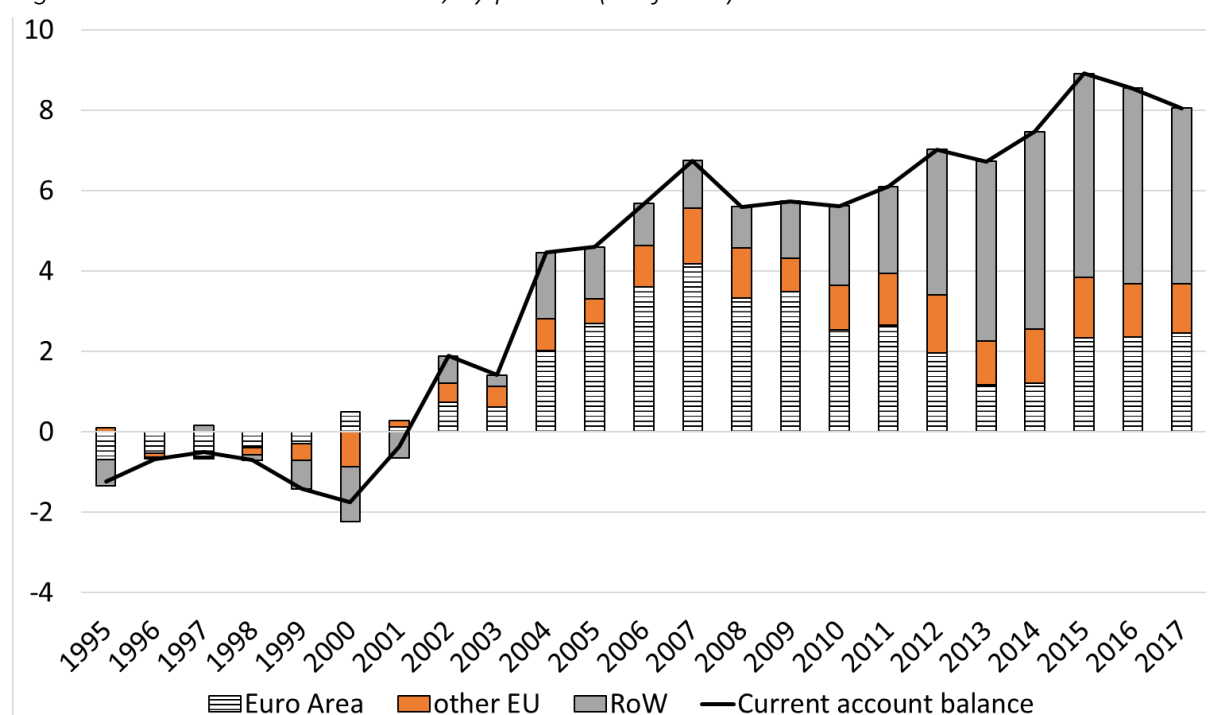
Stefano Micossi, Alexandra D’Onofrio and Fabrizia Peirce

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1. Introduction

When the euro was introduced in 1999, Germany had a current deficit in its balance of payments amounting to about 1.4% of GDP; in 2016 that balance had improved by some 10 percentage points of GDP, reaching a surplus of 8.5% of GDP, and hovering just below 8% in the ensuing two years. In absolute terms, this surplus in the current accounts is the largest in the entire world, above those of China and Japan, and is unprecedented in post-World War Two history (Priewe, 2018, Wolff, 2018). When the financial crisis in 2008-09 forced Germany’s partners in the euro area to adjust their deficits, the German surplus was in large part shifted onto the rest of the world (Figure 1), generating a euro area overall surplus of some 3.2% of aggregate GDP and feeding protectionist forces already at work worldwide. Even more striking, the main forecasters do not foresee any substantial correction of this giant disequilibrium in the medium term, which in Germany is viewed as the result of thrift and hard-conquered competitiveness, requiring *per se* no change in national policies. This appears in sharp contrast with the Chinese experience, where a comparable surplus in proportion to GDP was brought down to below 2% of GDP, following the sharp slowdown in trade growth in the aftermath of the financial crisis, by engineering a shift in the composition in aggregate demand towards domestic consumption (Priewe, 2018).

Figure 1. German current account, by partner (% of GDP)



Source: Deutsche Bundesbank and Ameco.

Germany represents the core of the euro area; its economic evolution has shaped and continues to shape economic developments and policies for the whole euro area, and in the medium term may determine its ultimate viability. This note discusses four features of the German economy which lie at the root of its external imbalances. It appears that a substantial correction of those imbalances is barely in sight. They are the evolution of its real exchange rate; the underlying trends in productivity and unit labour costs; the persistent shortfall of investment relative to domestic savings; and the deployment of much of the current external surplus in portfolio investments outside the euro area. The conclusions discuss the implications of these characteristics for the viability of the euro area in the medium term.

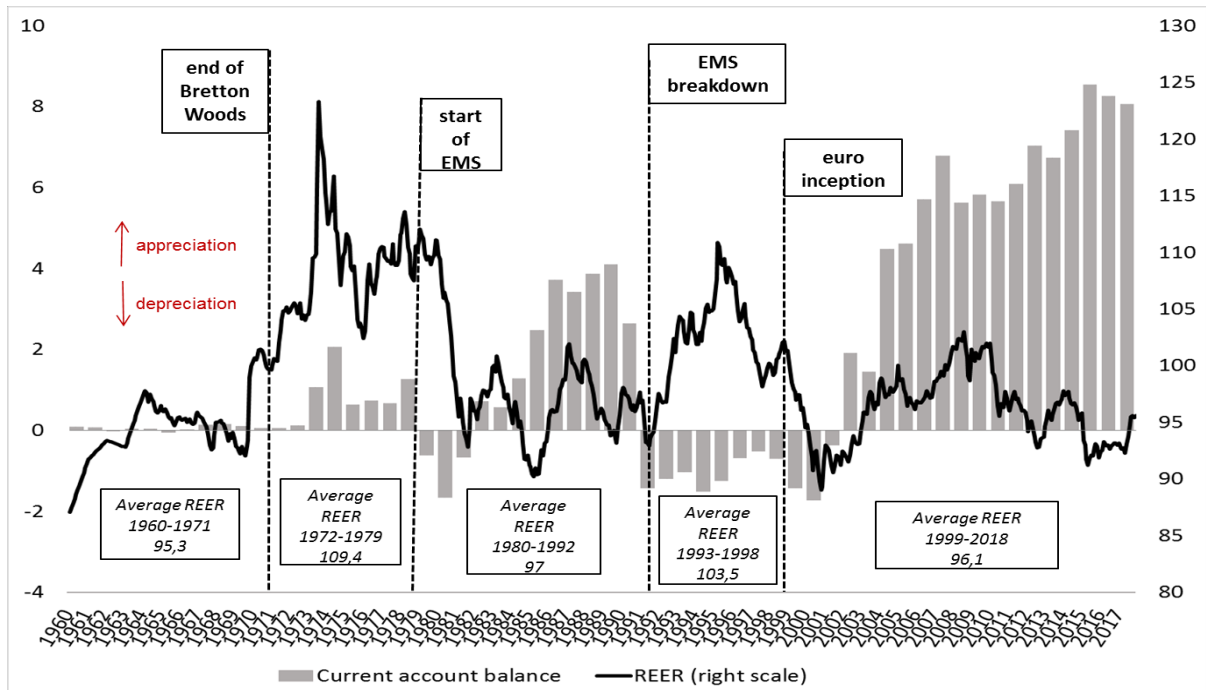
2. The German real exchange rate and current external accounts

Figure 2 shows the evolution of the German real exchange rate and current external balance since the 1960s. The real exchange rate is calculated as a weighted average of bilateral nominal exchange rates with 27 trading partners deflated by corresponding relative consumer price indices; after the inception of the euro, the real exchange rate of tradables vis-à-vis euro area partners only reflects the evolution of relative consumer price inflation. The index is calculated by setting 1971=100. The year 1971 was the year when the United States severed the official link between the dollar and the price of gold (but not yet letting the dollar float freely).¹ We have checked that the positioning and evolution of the real exchange curve is not affected by the choice of the base year by comparing it with the curve obtained by setting the base equal to the average of the real exchange rate for the entire period 1960-2018. This would indicate that the 1971 real exchange rate may be not far from equilibrium in view of balancing German current external accounts.

Three main facts in this Figure stand out. The first is that nominal exchange rate changes did lead to persistent real exchange rate changes, and that the German current account balance seemingly responded to real exchange rate variations, with appreciations above the 1971 value leading to reduced surpluses or, occasionally, even to deficits (in 1993-98, when the sharp appreciation of the Deutsche Mark (DM) after the breakdown of the European Monetary System (EMS) in 1993 was accompanied by a strong increase in domestic demand to accommodate the country's unification), and depreciations below that value coinciding with rising surpluses. Of course, these changes in real exchange rates also reflect the evolution of national macro-economic policies (as well as other endogenous and exogenous variables); for instance, the Bundesbank's unwillingness to accommodate domestic inflation resulting from exchange rate depreciations has helped sustain the resulting changes in the relative price of tradables.

¹ The private market link had already been severed in 1968 with the establishment of a two-tier market for gold, whereby private transactions were no longer held at the official gold price through central bank interventions. Cf. Bordo (1993).

Figure 2. Real effective exchange rates of Germany and current account balance (% of GDP, 1971=100)



Note: REER is calculated as geometric weighted averages of bilateral exchange rates towards 27 trading partners worldwide adjusted by relative consumer prices.

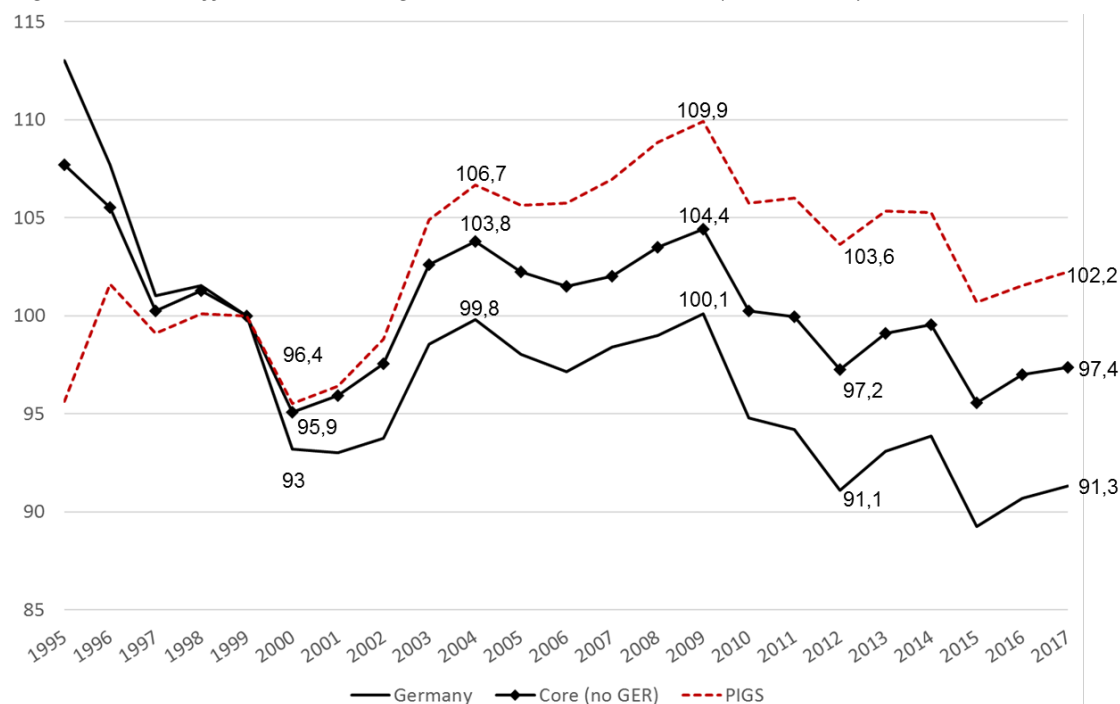
Source: BIS and European Commission; data for current account balance before 1971 from OECD; data for REER before 1964 from Bruegel.

The second fact emerging from Figure 2 is that the current external payments position of Germany is strong during periods of fixed exchange rates vis-à-vis its European partners, while its external surpluses recede when the DM is floating against all currencies. The large real exchange rate changes in Figure 2 mostly reflect the gyrations in the dollar exchange rate; however, they also comprise significant changes in intra-European real exchange rates. During the heyday of Bretton Woods, in the 1960s, the DM was constantly depreciating in real terms vis-à-vis the pound sterling and the French franc, until they were eventually forced to devalue (the pound in 1967, the French franc in 1969; cf. Obstfeld, 1993). During the EMS years, the DM's nominal realignments on average fell short of correcting productivity and inflation differentials with devaluing countries (notably for Italy, Spain and the United Kingdom, but not for France; cf. Eichengreen and Wyplosz, 1993), as this was in some cases considered a desirable element of discipline to foster convergence in fundamentals.

As for the euro area, Figure 3 shows the evolution of real effective exchange rates – in fact of relative consumer prices – for Germany, the other 'core' euro-currencies and the PIGS currencies (Portugal, Italy, Greece and Spain) since the inception of the euro. As may be seen, the common oscillations of these currencies vis-à-vis third currencies go hand in hand with a steady decline in the real exchange rate and the relative prices of German tradables relative to its main trading partners – and the distance has not receded even following the sizeable adjustment efforts undertaken by debtor countries after the euro debt crisis of 2010-13. As

may be seen, the real appreciation of PIGS exchange rates vis-à-vis German tradables since the inception of the euro was below 10% in 2008, on the eve of the financial crisis of Lehman origin, and close to 11% in 2017. In the meantime, all these countries' current external accounts had shifted from deficit to surplus (in the case of Ireland, 8.5% of GDP) except Greece, where in 2017 the current external deficit had fallen to 0.8% of GDP, mainly as a result of compression of domestic demand.

Figure 3. Real effective exchange rates in the euro area (1999=100)



Notes: REER is calculated as geometric weighted averages of bilateral exchange rates towards 42 trading partners worldwide adjusted by relative consumer prices. Core countries are Austria, Belgium, France, Finland and Netherlands. Source: Eurostat.

Back to Figure 2, the average value of the German real exchange rates is shown for each of five sub-periods: in two of them, 1972-79 and 1993-1998, when the DM was floating also vis-à-vis its European partners, its average real exchange rate index is well above 100; in the remaining three sub-periods, when the nominal exchange rate with European partners is fixed, the real exchange rate index hovers around 97. Thus it appears that participation in European managed or fixed exchange rate arrangements has also helped keep the DM exchange rate index, or the relative price of tradables, low against all other currencies, including the US dollar.

During the euro years, the share of German exports going to EU markets has declined from about 65% to 58%; that flowing to euro partners has declined more strongly, from 46% to about 37%. The latter decline reflects the drop in demand for German exports following the compression of domestic demand in the indebted importing countries. On this, the European Commission (2015) noted that “the current account improvements recorded in previous years were to a large extent non-cyclical, since imports were reduced on a permanent basis as result of reduced potential output in the non-tradable sector”.

All in all, it appears that intra-EU exchange rates have played a significant role in shielding German exports from the impact of dollar gyrations and helped feed the German surplus when the dollar was strong, as in the early EMS years, and when it was weak, as in the early euro years. The IMF (2017) maintains that Germany's real effective exchange rate remains undervalued by 10 to 20%, but they hide stronger appreciations of tradable prices for euro partners. The evidence that has been presented would indicate that the evolution of the relative price of tradables in Germany has played an important role in its exporting success, contradicting the widespread view that German exports are demand inelastic or, at all events, that German advantage from low tradable prices has not been significant (Gros, 2018).

The third striking fact in Figure 2 is that the German current account of the balance of payments since the 1960s has shown a surplus most of the time, but this surplus has run completely out of proportion since the inception of the euro, when exchange rates have been irrevocably fixed. Germany's current balance of payments with its euro partners in 2017 amounted to about €80 billion, out of which about one half was with France; the cumulative balance with its euro partners in 1999-2018 has been close to a trillion euros. It is about the same amount that Germany transferred to its Eastern Länders to unify the country between 1991 and 2003 (Dustmann et al., 2014).

Germany constantly resisted DM revaluations under fixed exchange rates arrangements – Bretton Woods in the 1960s, the EMS in the 1980s and early 1990s, and then the euro since 1999 – arguing that it could not take action that would purportedly weaken the international competitiveness of its industry.

There is however a fundamental difference between previous adjustable peg regimes and the euro area. Within the former arrangements, strong pressure to revalue the DM was generated by international capital inflows, which could not be indefinitely sterilised, and put pressure on domestic monetary growth until eventually the DM parity was changed. It happened in 1961 and repeatedly at the end of 1960s under Bretton Woods, and again on various occasions in the 1980s in the EMS. When after 1987 EMS partners decided to remove the possibility of exchange rate realignments, persistent inflation and productivity divergences between participating states led to the breakdown of the system in 1993, under irresistible speculative pressures. This experience played an important role in convincing future participants in the euro area that adjustable pegs were unstable, leading to the decision to fix mutual exchange rates irrevocably.

Thus, albeit with delay, as long as exchange rates could be realigned, international capital flows worked to establish some symmetry in external adjustment obligations between surplus and deficit countries. No such mechanism has been at work within the euro area, where domestic liquidity creation is under the control of an independent central bank – which in addition, as a rule, does not intervene in foreign exchange markets.

The only remaining adjustment mechanism in the euro area works through the markets for sovereign bonds: since lending of last resort for national sovereign debtors by the European Central Bank (ECB) is prohibited by the Treaties, financial investors will discipline national

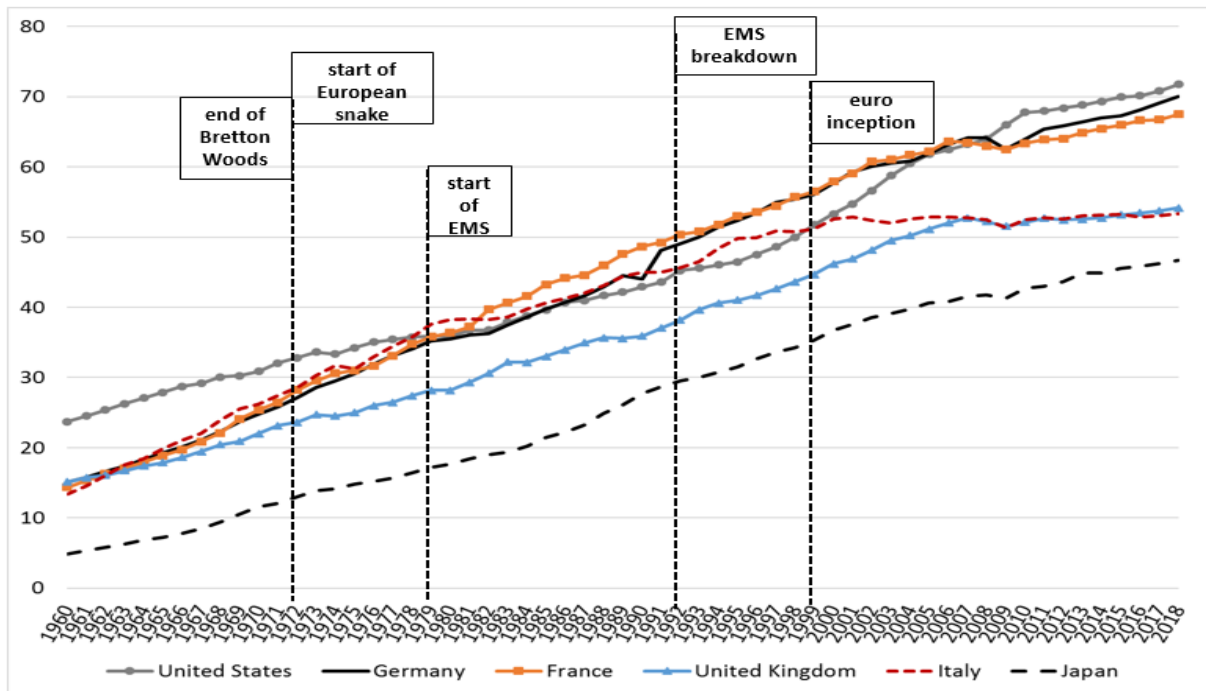
governments with unsustainable budgetary policies by selling their bonds (De Grauwe, 2011, Iversen et al., 2016). Under such arrangements, the German bund has become the financial anchor of the system, and adjustment obligations work asymmetrically to discipline member states with government deficits, forcing them to abide by the common budgetary rules and economic policy guidelines. However, there is little pressure for Germany to adjust its domestic policies in response to burgeoning external surpluses – except for low and even negative interest rates resulting from strong capital inflows, which have generated some strains on its banking and financial system.

The evidence that has been presented so far highlights already some solid justifications for Germany's 'revealed preference' for fixed exchange rates, and indeed for currency union, with its European trading partners. Its long-established economic model is strategically driven by export orientation, because the export sector provides a continuing source of profitable investment and high value-added jobs, and this economic model thrives with fixed exchange rates. Germany's competitive advantage is underpinned by productivity growth always exceeding productivity growth in its European trading partners, and a policy set-up able to secure strong domestic wage restraint.

3. Real wages and productivity

Figure 4 presents the long-term evolution of the levels of real labour productivity per hour in some industrial countries. As can be seen, Germany, France and Italy were moving in concert and gaining ground against the US since the 1960s up until the early nineties, with France and, in earlier years, also Italy, sometimes outperforming Germany. The UK was generally lagging behind, despite the acceleration that followed the Thatcher years. Since the mid-nineties, however, the pattern changed, with the US charging ahead and rising above the level of other countries, and Germany picking up speed to pull ahead of its European partners. While France lost little ground relative to Germany, Italy entered a period of stagnating productivity and descended to UK levels. Similar gains for Germany were observed relative to other euro area partners.

Figure 4. Real labour productivity per hour



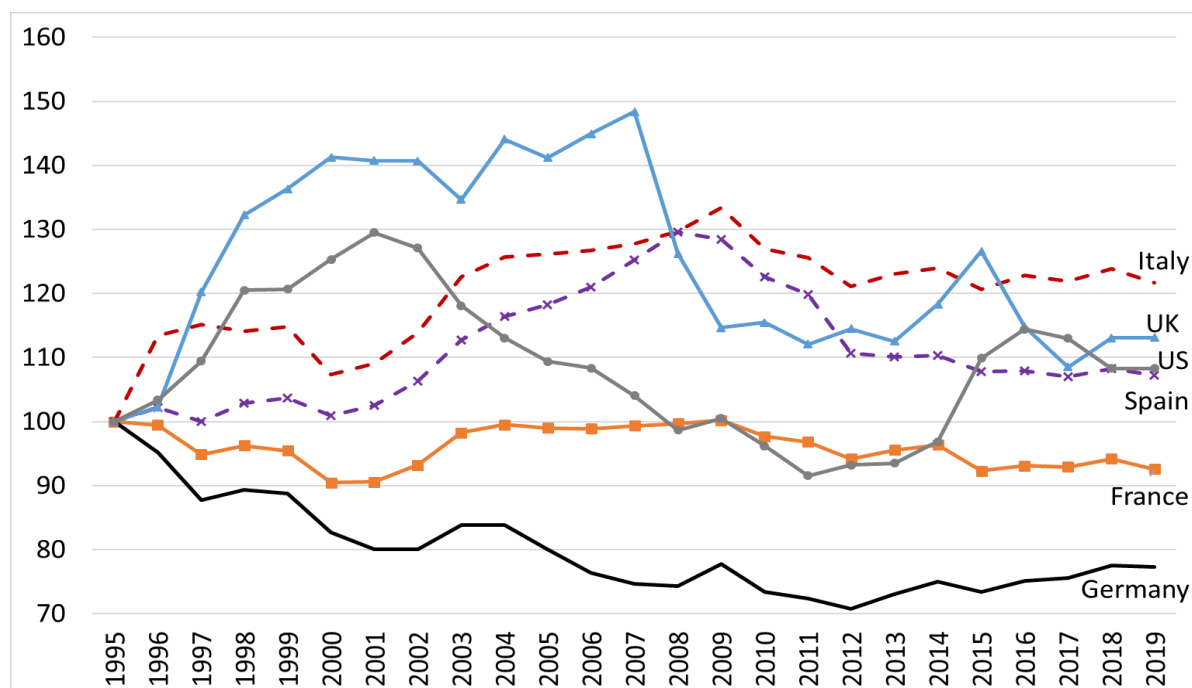
Note: Data are expressed in 2017 US\$ (converted to 2017 price level with updated 2011 PPPs).

Source: Conference Board.

Widening productivity differentials with euro area and EU partners is only half of the story; the other half is a distinct deceleration of wages that allowed Germany to lower unit labour costs much more than all its European partners as well as the US (cf. the OECD competitiveness indicators in Figure 5). As may be seen, Germany's relative gain came in two waves, the first in the second half of the nineties, the second in 2004-07 (i.e. after the Hartz reforms). The effects of the first wave far outweigh those of the second, with relative gains of 20% in the OECD competitiveness indicator. In the euro years the index initially rebounds, then falls step-by-step by about 10% until 2012, then rises again (i.e. there is a loss of competitiveness), almost back to the 20% level reached at the beginning of the decade. This increase reflects partly the weakening of the dollar and partly the improved competitiveness of euro area partners struggling to adjust after the debt crisis in 2010-13; the overall impact of these latter changes on German competitiveness is clearly of minor importance, as already noted above.

Thus, much of the improvement in German export competitiveness preceded the Hartz reforms, reflecting wage restraint that started in 1995; the Hartz reforms, however, did push lower wages further down and raised the number of people in insecure jobs and at risk of poverty. It may be recalled in this context that Germany's low-wage sector is the largest in the EU after the Baltic states, Poland and Romania (Dustmann et al., 2014; Odendahl, 2017).

Figure 5. OECD indicators of competitiveness based on relative unit labour costs (1995=100)



Source: OECD. Notes: Competitiveness weights take into account the structure of competition in both export and import markets of the goods sector of 53 countries. An increase in the index indicates a real effective appreciation and a corresponding deterioration of the competitive position.

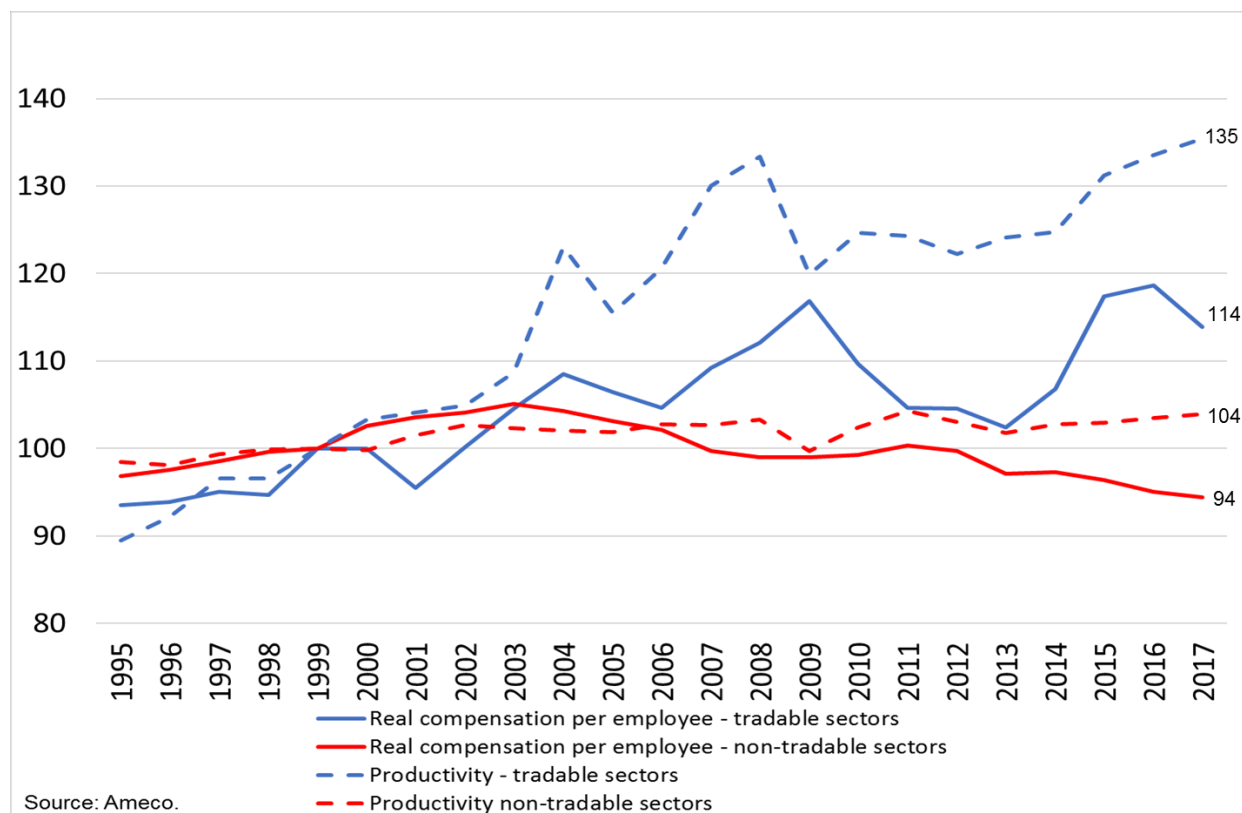
Various factors were at work in the remarkable deceleration of wages since 1995 (Dustmann et al., 2014; Carlin and Soskice, 2009; The Economist, 2017). A major role was played by the decentralisation of wage setting (also including hours and other aspects of working conditions) that took place in the second half of the 1990s whereby most wage contracts came progressively to be decided at company level. The fall in the weight of industry-wide agreements was facilitated by the dramatic decline in the rate of unionisation, which helped weaken the negotiating power of organised labour. German unification and the enlargement eastwards of the EU also played a role by raising the labour supply with cheaper labour with comparable skills in various segments of the labour market. And, finally, in an environment of accelerating globalisation in output markets, the consensual system of industrial relations reacted by accepting the exchange between job stability and wage restraint; there was thus a multiplication of job-sharing arrangements in companies and market segments hit by falling demand, making it possible to weather the 2009-10 fall in manufacturing activity virtually without job losses.

Thus, the restructuring of labour relations was mainly private-sector led by using, and transforming, traditional German institutions based on employer-worker cooperation (Bastasin 2013, Dustmann et al., 2014, Iversen et al., 2016). These changes have played a major role in engineering the German recovery from the dire situation of the post-unification years and may also be expected to underpin continuing strength of German manufacturing industry in the years to come – despite some recent policy actions, e.g. the introduction of a country-wide minimum wage, and the recovery underway of wages in industry.

The success of this strategy cannot be fully understood without considering two further components of the policy set-up: the anti-inflationary policy of the Bundesbank and, later, of the ECB and disciplined budgetary policies (Iversen et al., 2016).

The first aspect is relevant in maintaining constant pressure against inflationary settlements, which in the pre-euro times would be punished by the central bank by means of interest rate increases depressing activity and employment; within the euro, any increase in local inflation would lead to an immediate loss of competitiveness vis-à-vis trading partners in the internal market. Strict anti-inflationary policies are especially relevant due to the high intersectoral productivity differential which – as was famously explained among others by Balassa (1964) – may push up inflation in low-productivity sectors to the extent that their wage levels are drawn towards those prevailing in high-productivity sectors. The Bundesbank and the ECB have managed to counter this source of inflationary pressure effectively, both under fixed and under flexible exchange rates. Similarly, disciplined budgetary policy has played an important role in preserving the stable domestic environment required by the export-oriented economic model by effectively restraining wage increases in the public sector, which would not be otherwise constrained by market forces.

Figure 6. Labour productivity and real compensation per employee (1999=100)



Some further features in the deceleration of wages in Germany since 1995 are worth stressing. The first one is that real wage increases were concentrated in manufacturing, mostly export-oriented, while wages fell elsewhere in the economy throughout the 2000s (cf. Figure 6). Moreover, wages for the low-skilled fell significantly across the board, partly reflecting a conscious effort by the German government to create a flexible labour market for the low-skilled to mitigate the rise in unemployment within this group (Dustmann et al., 2014, Carlin and Soskice, 2009). As a result, there was a dramatic increase in wage inequality but very little increase in unemployment.

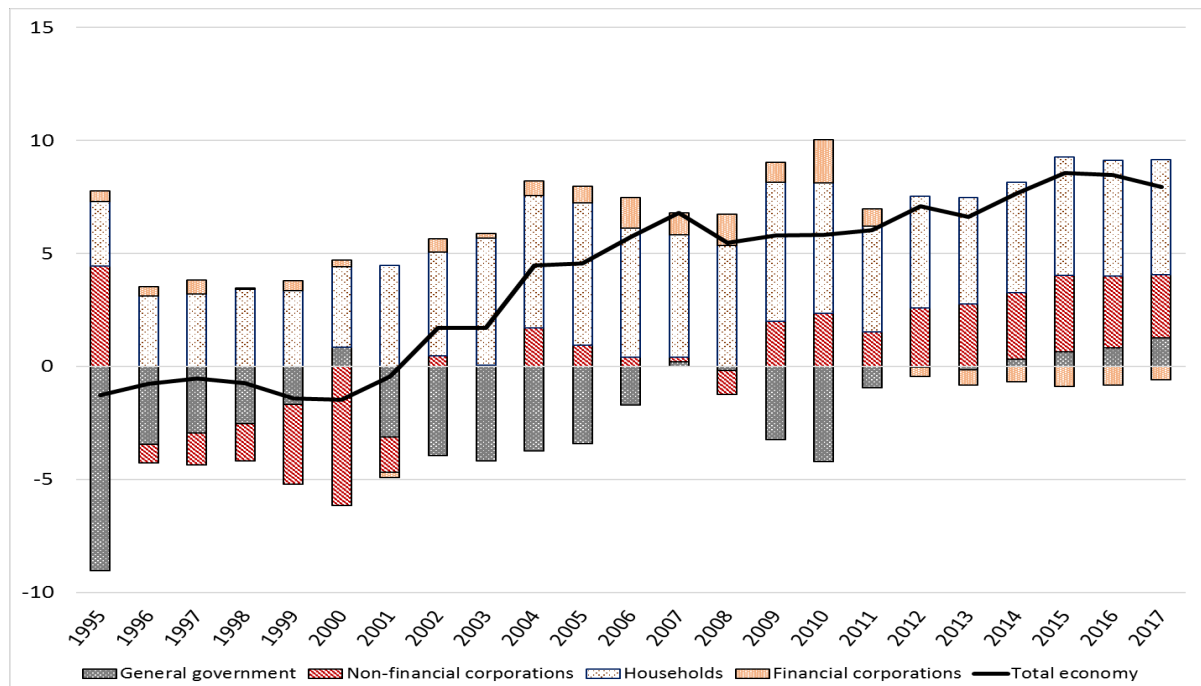
Wage moderation has ensured that real productivity increases normally exceeded wage increases; in the early euro years, the margin between the two became very large, both for tradables (manufacturing) and for non-tradables: the accumulated gap from the inception of the euro is about 18% for tradables and around 11% for non-tradables (cf. the index levels in Figure 6).

As has been noted by Dustmann et al. (2014), while the share of value added in manufacturing (export sector) out of total value added has remained roughly constant (and considerably higher than in any other industrial country) since 1995, at around 23%, the share of manufacturing output in total output (value of final product) has risen considerably. This means that the share of inputs flowing to manufacturing from other domestic sectors has increased and that, therefore, the manufacturing sector has enjoyed important benefits from low wages in the rest of the economy. Cheap imports from the rest of the world – and notably from Eastern European countries – have played a similar role as the German manufacturing industry off-shored many low and medium technology components of total output to benefit from cheaper and generally more favourable working environments.

4. Savings, investment and domestic demand

The current external account reflects a domestic imbalance between savings and investment. Figure 7 shows the sectoral net savings balances for the household sector, the corporate sector and the public sector since the second half of the 1990s, together with the resulting evolution of the current external balance. In the early- and mid-1990s, Germany had a current external deficit, mainly resulting from a sizeable public sector deficit, which was due in turn to the costs of unification. Later in the decade, as the public sector deficit was receding, the corporate sector went into sizeable indebtedness to meet deteriorating profitability and rising costs. It is easy to verify that since the inception of the euro, the large improvement in the current external balance is mainly due to increasing net savings by the corporate sector and the public sector. There is no evidence of a significant role for household savings.

Figure 7. German net lending/net borrowing by sector (% of GDP)



Source: Authors elaboration based on Eurostat and Deutsche Bundesbank data.

Economic theory suggests that in an ageing society savings would rise as working cohorts in the population approach retirement but would subsequently fall as they retire. This is precisely what may have been driving German household savings patterns in the past two decades (European Commission, 2018). Initially, as the large cohort of baby-boomers was anticipating retirement, its saving rate went up, from around 3% of GDP in the late 1990s to above 6% in 2009-10; subsequently, as they retired in increasing numbers, the saving rate receded to below 5%. This decline may also reflect the fall in household disposable income, whose ratio to GDP fell by about 5 percentage points in the euro years (from about 63% to 58% of GDP). In any case, the reduction in the (net) household savings rate was taking place precisely when the current external surplus was rising to new highs, highlighting the unimportant role of this variable in swelling the balance of payments surplus in recent years.

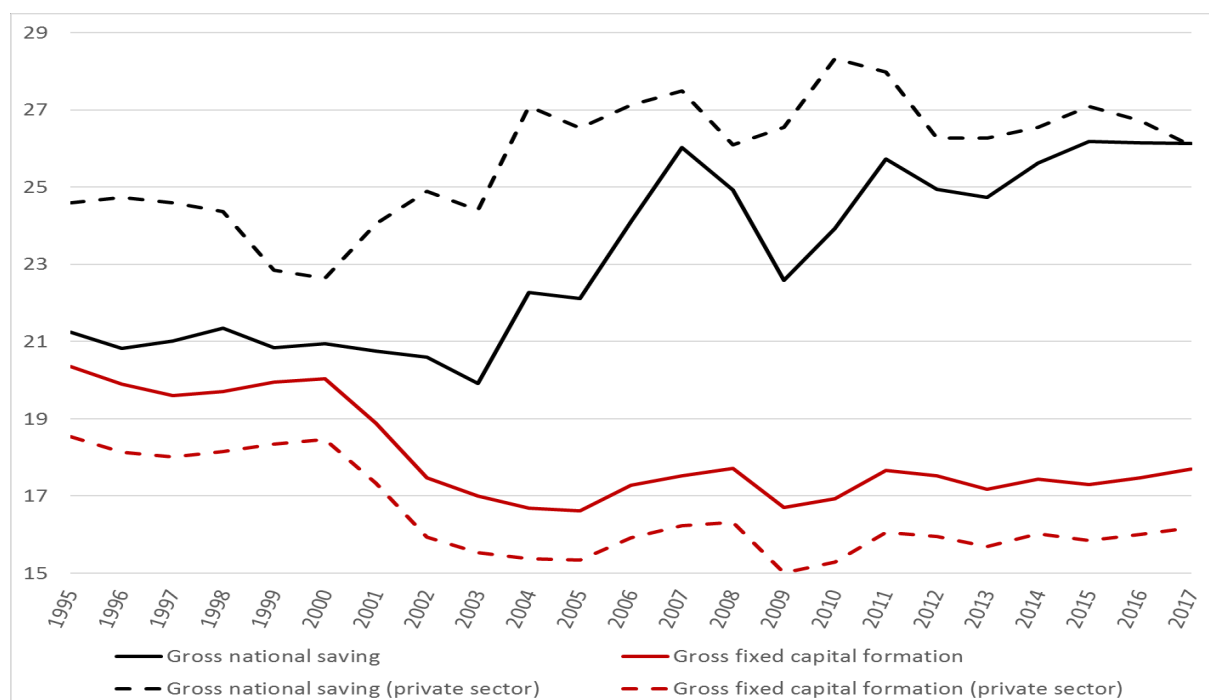
As to the corporate sector, its net balance shifted from negative and large in the late 1990s to slightly positive in the early euro years; after 2009 the positive balance swelled to almost 3% of GDP. Thus, the total improvement in the net savings position of the corporate sector – from a net borrowing position in 1999-2001 of over 3.5% of GDP to a net lending position in 2016-17 of about 3% of GDP – amounts to some 6.5 percentage points of GDP. Clearly, this is where the most important contribution to the burgeoning current account surplus of Germany lies; up until 2007-08, the improvement in net savings is the result of improved profit margins stemming from severe wage restraint (Bennet and Wolff, 2017, Wolff, 2018). Later on, the public sector balance also played a growing role as it turned from deficit to surplus.

The shift from a net debtor to a net creditor position is of course due to discretionary policy decisions: while up until the 2008-09 financial crisis the public sector continued to provide

support to domestic demand, in the ensuing years the priority shifted to reducing the public sector deficit to bring down the government debt. Since the inception of the euro, the net improvement in the public sector balance is in order of 3% of GDP, leaving a surplus in 2017 of 1.2% of GDP (1.6% is projected for 2018). This improvement was achieved precisely in those years when the euro area was falling steeply into recession, aggravating the aggregate fall in demand and activity. At that time, following the Greek debt crisis, Germany also imposed a sharp shift to 'austerity' in the common budgetary policy orientations at EU level; with the benefit of hindsight there is room to argue that these pro-cyclical policies have played a role in fuelling political opposition against the Union and the euro in Italy and elsewhere among debtor countries.

All in all, IMF (2018) estimated that Germany's net external balance remains substantially stronger than implied by medium-term fundamentals and desirable policy settings, i.e. an excess of 3¼ to 6¼ percentage points of GDP relative to an estimated 'norm' of 2-4½% of GDP. They maintain that higher public and private investment would be highly beneficial to address a dearth of productive capital and badly needed infrastructures.

Figure 8. German saving and investment (% of GDP)



Source: Ameco.

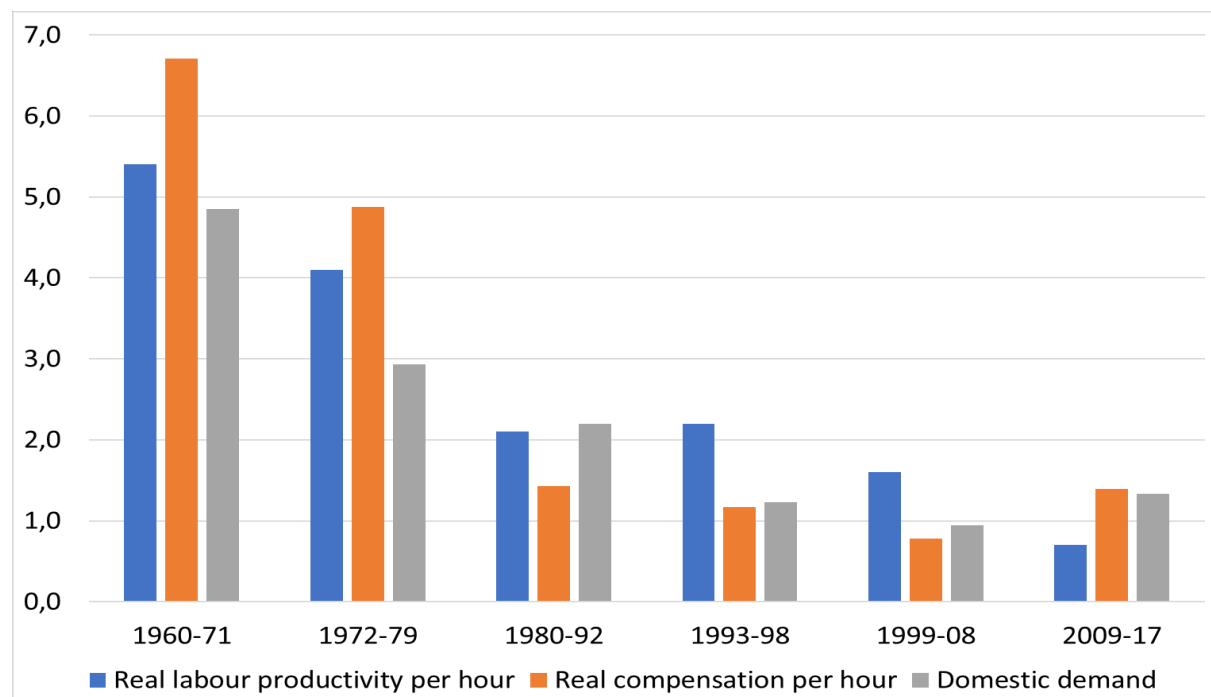
And indeed, an important feature in the evolving net savings position is the rather dramatic fall in investment rates (Figure 8), amounting since the inception of the euro to about 2.2 percentage points of GDP. Large gaps are recorded in public investment for infrastructures, digital networks and education (cf. European Commission, 2018). The same document notes that during the past two decades the private capital stock increased much more slowly than the rest of the EU-15, “with potentially negative effects on the long-term potential growth” (p. 38)

and, moreover, that net lending remains largely positive despite very favourable financial conditions. It also observes that larger companies continue to invest at a lower rate than capital depreciation, so that their net capital stock is decreasing. As to the sectoral composition of investment, the service sector, still largely closed to competition, and small and medium-sized companies are lagging, in comparison with other advanced countries, in intangible assets and digital skills.

During the past eighteen months investment has been picking up, especially in machinery and equipment, reacting to high orders and capacity utilisation as well as to tightening conditions in the labour market, where unemployment rates have now fallen to historically low levels (3.4%). In view of this evidence, one wonders to what extent low investment during the past two decades might be directly related to low wages and ample slack in the labour market.

Figure 9 may help bring some light to this matter. The Figure shows, for each of six sub-periods dating back to the 1960s (the same periods identified in Figure 2), the average yearly increase in real labour productivity, real labour compensation per hour and domestic demand. As may be seen, in the earlier sub-periods real compensation per hour exceeded productivity increases while subsequently it always fell short of them up until the 2008-09 financial crisis. As we have already seen, the proportionate gap between productivity increases and real labour compensation widens in 1999-08, which are the years of maximum wage restraint.

Figure 9. German Domestic demand, labour productivity and real compensation per hour (average annual growth in periods)



Source: Ameco.

In the 2009-17 period, productivity has slowed below hourly compensation, reflecting the sharp fall of productivity in 2009 and its subsequent slow growth, while wage growth was recovering thanks to diminishing slack in the labour market. The waning productivity margins relative to labour compensation have likely increased pressure on the corporate sector to raise investment. This may confirm that wage restraint and high slack in the labour market have contributed to depressing private investment.

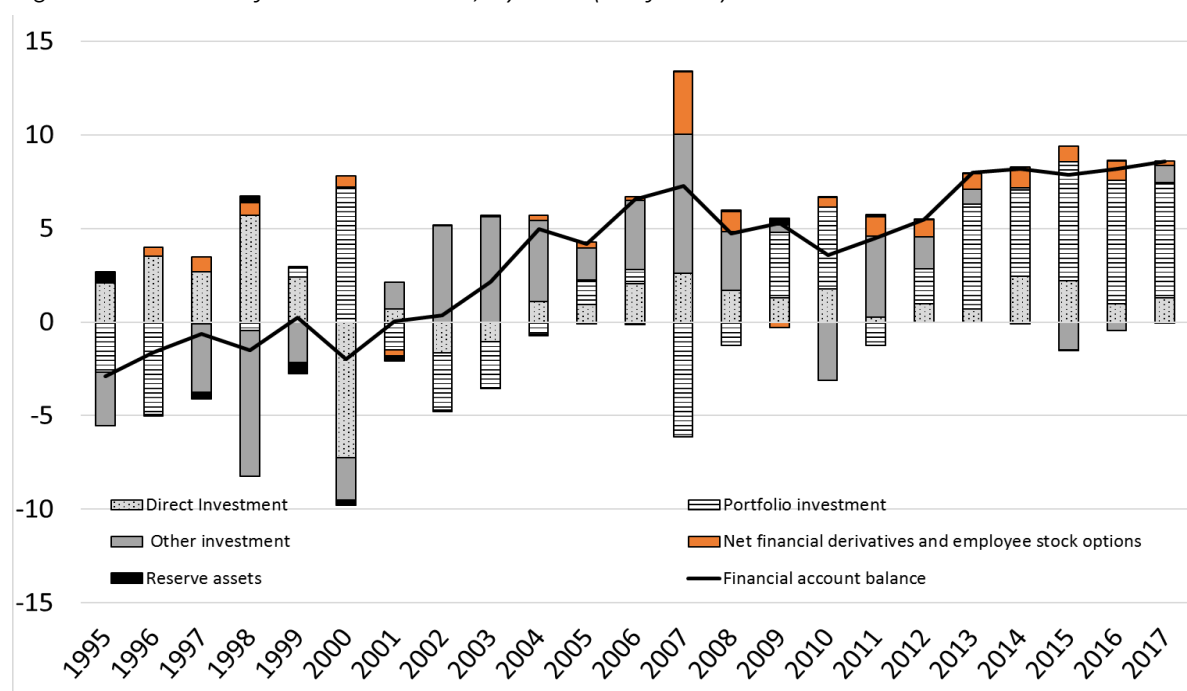
Another interesting finding in Figure 9 is that the rate of growth of real domestic demand in the euro years appears strictly aligned to the rate of increase of labour compensation. This is not surprising, in an environment in which the public sector was increasingly retrenching and private investment was stagnating. However, it calls the attention to the importance of wage developments in moderating the increase in domestic demand, thus leaving room for the expanding export sector. It may be recalled in this regard that during the euro years the share of exports in GDP rose from 27% to 47%, with a massive reorientation of the economy towards the foreign sector.

As shown by Micossi (2016), in euro countries where the relative prices of tradables continued to move in favour of Germany, low growth in wages and domestic demand in Germany has constrained wages and domestic demand growth in euro partner countries – because domestic demand growth in those countries cannot exceed that in Germany without pushing the country against the balance-of-payments constraint and eventually eliciting harsh punishment by financial markets.

5. Financial counterparts to external surpluses

Some considerations are in order regarding the disposal of Germany's current external surpluses. The evolution of the balance of payments in financial transactions is represented in Figure 10. In the early euro years, swelling imbalances between participating countries were financed mostly by intra-euro area capital flows through the purchase of government and financial institution securities, including by private investors and cross-border interbank lending (Chen et al., 2013), with a substantial involvement of German financial institutions. During the euro debt crisis in 2010-13, private cross-border financing collapsed and imbalances were curtailed; much of what was left was financed through the ECB by means of extraordinary lending operations and Target2 balances (Micossi, 2015). Afterwards, the music changed. As may be seen, Germany's outward financial flows were dominated by net portfolio investments, which have come to represent close to 75% of the total. The growing net balance mostly reflects the decline of foreign portfolio investment in Germany, basically owing to sharply diminishing and even negative returns on German bonds (including notably the government Bunds, that during the great financial crisis of 2008-09 had come to be seen as a major haven for international investors).

Figure 10. German financial account, by item (% of GDP)



Source: Deutsche Bundesbank and Ameco.

Over time, the net investment position (stock) has risen to some 60% of German GDP, and net returns on this accumulated wealth have become a rising component of the German current external surplus, amounting in 2017 to close to 2% of GDP. Busse and Gros (2017) have shown that returns on these foreign investments have been satisfactory, although some sizeable losses were incurred in the crisis years (about 15% of outstanding wealth in 2007-11, according to Wolff, 2018).

Those financial investments abroad are in securities of rather short duration (less than five years) or, when placed in equity, in instruments traded in deep markets; they have been going increasingly to non-euro markets (albeit often denominated in euro; cf. Deutsche Bundesbank, 2018). Direct investment flows are much more balanced; outflows are often directed to the euro area, mostly the UK, France, the Netherlands and Luxembourg; to an important extent they reflect investments in foreign subsidiaries of German companies. Altogether, the equity component is relatively small and in any case does not contribute to private risk sharing in the euro area, notably on account of the prevalence of debt instruments and because not much of the German surplus capital is going to higher-risk countries within the euro area. Therefore, if there were renewed financial instability involving the higher debt countries in the euro area, there would likely be a need for public financial assistance through the European Stability Mechanism (ESM), and even some risk of having to engineer a public bailout.

The second and related feature in recent developments concerns the Target2 balances of the Bundesbank vis-à-vis the ECB, which has risen again to over €900 billion. Changes in these balances are recorded in the balance of payments under other investments; when a foreign investor sells German bonds and places the proceeds as a deposit with a German bank, these

balances increase. Consequently, the net impact on the overall balance is small since any increase in Target balances, which is recorded as a capital outflow, corresponds to a parallel increase in the foreign liabilities of the banking system, which is recorded as a capital inflow (Busse and Gros, 2017).

As pointed out by De Grauwe et al. (2017), rising Target2 balances reflect to a significant extent the fact that the liquidity released by the ECB purchases of peripheral countries' government bonds is being used to acquire euro assets in Germany (or at least in the core countries). Thus, the risk of a sovereign crisis in a peripheral country that private investors are unwilling to bear is shifted onto the national central banks within the European System of Central Banks (ESCB); this is a clear indicator of persisting market fragmentation and the incomplete capital markets union.

An interesting aspect is that, as noted by Busse and Gros (2017), Target2 balances are jointly and severally guaranteed by the countries participating in the ESCB – so that even in the very unlikely event of a country leaving the euro area and refusing to repay its debtor balance to the ECB, then the losses would be shared according to the ECB capital key among the remaining member countries. Another way of making the same point is that the German exposure to Target2 is guaranteed by its partners in the ESCB. Thus, rather than helping to share risks within the euro area, Germany has, through this arrangement, shifted part of its own risks onto the rest of the euro area.

In sum, the capital accumulated by Germany owing to its external surpluses does not contribute to reducing the risks of instability or currency redenomination that are still present in the euro area (Micossi, 2017, ECB, 2016), and neither does it contribute to raising the real investment rate within the euro area.

6. Conclusions

In a recent survey from a panel of macro-economists based across Europe undertaken by the Centre for Macroeconomics and the CEPR, 69% of respondents were of the view that German current account surpluses pose a threat to the eurozone economy (den Haan et al., 2016).

The euro has allowed Germany to maintain a strong competitive position for its exports within the euro area and has helped moderate the appreciation of its exchange rate vis-à-vis the main third-country currencies. Adjustment efforts by peripheral countries in the euro area have not dented the real depreciation of German tradables within the area. IMF (2017) estimates that the real effective exchange rate of German tradables is undervalued by between 10 and 20%; our estimates in Figure 2 are considerably lower, in the order of 5%, but they hide stronger appreciations of tradable prices for euro partners. The evidence that has been presented would indicate that the evolution of the relative price of tradables in Germany has played an important role in its exporting success, contradicting the widespread view that German exports are demand inelastic or, in any case, that German advantage from low tradable prices has not been significant (as in Gros, 2018).

Moreover, the currency union has eliminated much of the pressure on Germany to adjust its gigantic external surplus, since capital inflows no longer affect its monetary base creation; the main cost has been low and even negative interest rates resulting from strong capital inflows, which have generated some strains on its banking and financial system. Within the euro area, the main adjustment mechanism in response to (domestic and external) financial imbalances has worked through the markets for sovereign bonds, because the euro cannot be used freely to provide liquidity support (lending of last resort) when they come under stress.

The export strength of German manufacturing has been built on one hand upon a rate of growth in productivity in manufacturing that has been constantly in excess of its European partners (albeit slowing as elsewhere among advanced countries); on the other hand, upon a remarkable measure of wage restraint that had already started in the late nineties and was further reinforced by the Hartz reforms in the early 2000s. Real wages increased in the manufacturing sector but actually fell in the rest of the economy, helping ensure strong profitability in manufacturing and a cheap input base for the export sector in the rest of the economy. It may be recalled that Germany now has the largest low-wage sector in the EU after the Baltic states, Poland and Romania, and extreme wage inequality.

The restructuring of the labour market was largely private-led and was undertaken by transforming the traditional labour market institutions based on employer-worker cooperation, notably through a remarkable decentralisation of wage negotiation to company level. However, public policies also played a role: the anti-inflationary monetary policy entrusted to the ECB and increasingly strict budgetary policies ensured that inflationary wage developments would not arise elsewhere in the economy, despite large productivity differentials between manufacturing and the rest of the economy.

The analysis of sectoral balances between savings and investment shows that the enormous increase in Germany's current external surplus was determined by rising profits and low investment in the corporate sector and by the shift of the public sector budget from deficit to surplus in the euro years. Increased savings by the household sector do not contribute to the explanation of the surplus, contradicting the view whereby the surplus was the result of higher savings by an ageing population.

Low growth of domestic demand in Germany together with a constantly depreciated relative price of tradables has forced its partners to compress wages and undertake domestic deflation to try to make up the gap in unit labour costs – without ever succeeding in catching up. Thus, for many countries, participation in the monetary union, while ensuring important benefits of financial stability and low interest rates, has been detrimental to the prosperity of their working classes.

And, finally, the analysis of the capital account of the balance of payments shows that Germany has contributed neither to real investments within the euro area nor to sharing the risks implicit in an incomplete monetary union with divergent national fiscal policies.

In sum, Germany has exploited the euro to transform its economy into a highly efficient export machine – with exports doubling their share of GDP since the inception of the euro – but this result has been achieved by squeezing the standard of living of workers at home and in its partner countries. This has contributed to weakening the political support for the euro amongst its members, while the risk is rising of a protectionist backlash from major trading partners beyond the euro area.

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