

THE GERMAN CURRENT ACCOUNT – ACTIONISM IS INAPPROPRIATE

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This is a translated version of the original German-language chapter "Deutscher Leistungsbilanzüberschuss - Aktionismus nicht angebracht", which is the sole authoritative text. Please cite the original German-language chapter if any reference is made to this text.

THE KEY DETAILS IN BRIEF

Criticism of the German current account surplus

Germany has recorded a high current account surplus by historical and international comparison for more than ten years. It is consequently subject to increasing criticism from other countries. For example, the European Commission diagnosed Germany as suffering from a macroeconomic imbalance, which is considered an impediment to euro area recovery. The German federal government is called upon to stimulate domestic demand in order to reduce the current account surplus.

The German Council of Economic Experts cannot concur with this critical point of view. We have examined the current account surplus from both sides – the financing side and the real economic side – in order to identify the causes of the high current account surplus.

The financing side

Germany's current account expansion is primarily due to private sector consolidation. Households have limited their net investment while maintaining a constant savings rate. Companies have increased their equity ratios and also largely reinvested profits earned abroad in those countries, not least for tax purposes. The government has also contributed to the current account surplus by reducing its deficits.

A general investment weakness cannot be determined. The weak development of investment in machinery and equipment is largely due to price effects; there are no signs of undesirable structural development. The decline in construction investment is related to the construction boom of the 1990s. The German Council of Economic Experts believes that private investment can be increased primarily by improving general conditions. In terms of public investment, an additional need can be determined at most for civil engineering of a low single-digit billion figure per year.

The real economic side

From a real economic point of view, the current account expansion is based on three factors: firstly, on revenue growth of German exporters as a result of the global upswing, secondly on improvement in price competitiveness of German companies and thirdly on the dampening effect of moderate wage development on consumer demand. The empirical literature views the effects of fiscal policy on the current account balance as moderate.

In addition to the previously named factors, fiscal measures to ease the euro-area crisis have also contributed to the current account surplus. These permitted deficit countries to avoid a “sudden stop” and to reduce their current account deficits more gradually.

Implications for economic policy

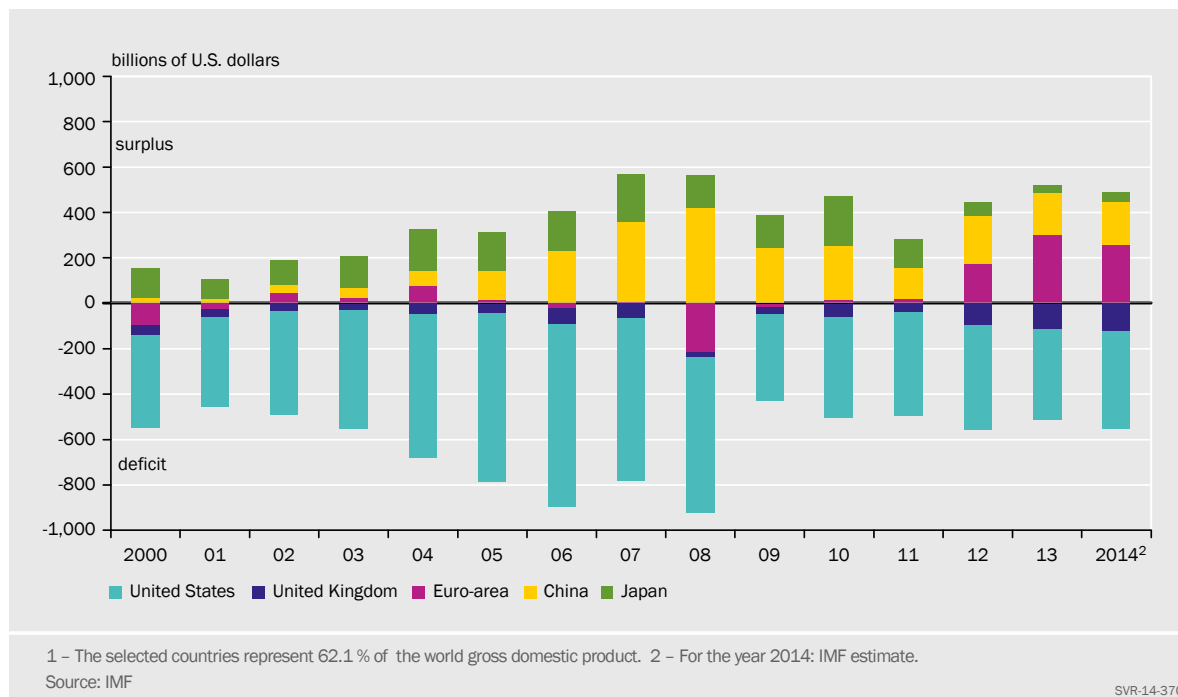
From the German Council of Economic Experts' point of view, no economic policy measures should be taken with the sole aim of reducing the German current account surplus. Nevertheless, the German Council of Economic Experts considers the European Commission's recommendation of increasing production potential – for example, through more migration of skilled foreign workers and increased labour force participation – as sensible.

I. THE CURRENT CONTROVERSY

400. Germany has recorded a **high current account surplus** for more than a decade now, in both historical and international comparison. A positive balance of around 7% of GDP is unusual even for Germany, which has traditionally been a surplus country with the exception of the 1990s. There are not many highly developed national economies that have achieved 7% in the last 35 years. Those that have include small national economies Hong Kong, Singapore, Taiwan and Switzerland, and Norway, which are rich in natural resources.
401. The high current account surplus has been a **target of criticism** for some time now, primarily from other countries. The general discussion about “**current account imbalances**” is nothing new, and prior to the 2008/09 financial and economic crisis primarily concerned the US current account deficits and China's high surpluses. [↘ AER 2006 ITEM 141 ET SEQ.](#) Recently, however, the discussion has intensified, largely in view of Germany's importance to the euro area recovery.
402. The **US Department of the Treasury** asked German politicians to stimulate domestic demand in autumn 2013 in order to reduce the surplus, help other euro member states to reduce their current account deficits and support their economic recovery. As a result of Germany's alleged weak domestic demand and large related current account surplus, it is creating a deflationary bias not only for the euro area, but for the world economy as well (U.S. Treasury, 2013).
403. For the international debate on “current account imbalances” however, it should be noted that it is not the current account balances of individual euro area member states that are relevant, but if at all, the current account balance of the monetary union overall. [↘ CHART 48](#) This figure, however, was almost balanced on average over the past 15 years, and did not contribute to the divergences in current account balances observed worldwide. The criticism of Germany expressed by countries outside the euro area is thus not convincing.
404. Moreover, the **European Commission** diagnosed macroeconomic imbalances in Germany in March 2014 through its “Macroeconomic Imbalances Procedure” (European Commission, 2014). The Macroeconomic Imbalances Procedure should be viewed very critically concerning its stance on the current account. There are a number of institutions within the framework of the Stability and Growth Pact (SGP), the Fiscal Compact and the Banking Union that monitor developments in the public and private sectors and thus major determinants of the current account. Potential risks are consequently already under surveillance (AER 2010 item 171 et seq.; AER 2012 item 223).
405. Two fundamental problems emerge in the discussion on **current account imbalances**. Firstly, there are no generally recognised thresholds for excessive current account surpluses or deficits. The normal range of -4 % to +6 % on the “Macroeconomic Imbalances Procedure Scoreboard” is arbitrary and provides no convincing indicator of whether there is an “external imbalance” in a given economy. While the technical document accompanying the scoreboard argues

↘ CHART 48

Current account balance for selected countries¹



convincingly along the lines of relevant academic literature that the persisting current account deficits in combination with higher net foreign debt could make a country more susceptible to crisis, there is no associated reason for monitoring and certainly not for sanctioning current account surpluses (European Commission, 2012). The term current account imbalance and above all the set thresholds are politically set and not economically founded (AER 2013, Gros and Busse, 2013).

Secondly, there is indeed a dispute in economics as to the significance a country's current account surplus has on the rest of the world. Proponents of the “**savings glut**” theory (Bernanke, 2005; von Weizsäcker, 2011) assume that a country with a current account surplus makes its savings available to other countries, which leads to lower rates of interest in those countries and enables additional investment, but also generates excessive lending. Other critics of the German current account surplus also argue that this can be traced back to much lower demand for imports than it should be compared to exports. This in turn slows down macroeconomic growth in other countries, forcing economic policymakers to make corrections.

406. Moreover the high German current account surplus has resulted in a **considerable rise in foreign claims** in recent years. In the course of the global financial and euro-area crises, however, doubts increasingly surfaced regarding the profitability of Germany's foreign assets. The marked increase in the Deutsche Bundesbank's Target2 balance in the period between 2008 and 2012 was the main driver of this debate (Sinn, 2012).
407. The current account can be analysed from two sides. ↘ BOX 19 As the difference between exports and imports, it reflects the development of current account transactions, thus representing the real economic side. Because the current ac-

count balance is identical to a country's net formation of financial assets (net lending/net borrowing), it also reflects the **development of national asset accumulation**. It is a good idea to observe the two sides separately in order to identify the factors that have contributed to the development of the German current account in the last 15 years.

▷ BOX 19

Key terms and relationships in the balance of payments statistics

The balance of payments statistics is a statement of transaction flows (AER 2006 Box 7; AER 2009 Box 6; AER 2010 Box 9) and comprises the sum of all economic transactions within a year that a country has made with the rest of the world. Every transaction – whether a goods/services or financial transaction – is accompanied by an opposite entry in the accounts. The balance of payments is ultimately always a net of zero, though this does not apply to the individual sub-accounts it contains. The two main sub-accounts of the balance of payments are the current account (CA) and the financial account (FA). The change in ownership of assets (COA) and inclusion of a residual item (RI) also ensure the statistical identity of the balance of payments (BOP):

$$(1) \text{ BOP} = \text{CA} + \text{FA} + \text{COA} + \text{RI} = 0$$

In quantitative terms, the latter two sub-accounts however are only of minor relevance, so it is approximately almost always true that a given balance in the current account must have an equal and opposite balance in the financial account. The German current account surplus can thus be examined using these two sub-accounts. The **current account** is analysed on the basis of goods and income transactions between a country and the rest of the world, the real economic perspective. The current account balance is broken down into the balance of trade (BT), the balance of services (BS), the primary income (PI) account and the secondary income (SI) account. These sub-accounts include the sums of all exported and imported goods and services (goods and services account), the receipt or payment of wages and interest earned on assets abroad (primary income), and current payments for development aid and to international organisations (secondary income) without quid pro quo.

$$(2) \text{ CA} = \text{BT} + \text{BS} + \text{PI} + \text{SI}$$

The **financial account** reflects financial flows. For example, an entry of an exported good in the current account is offset by an equal but opposite entry in the financial account because the financial claims on foreign payment increase. All entries in the financial account can be allocated to one of the four sub-accounts of the financial account: direct investment (DI), portfolio investment (PI), other investment (OI) and reserve account (RA).

$$(3) \text{ FA} = \text{DI} + \text{PI} + \text{OI} + \text{RA}$$

A current account surplus means that a country has recorded more receivables from the rest of the world than it has liabilities to the rest of the world in the specified period. This can be accomplished in the form of domestic production or factor income derived from capital invested abroad or remittances from workers abroad. This thus automatically improves the net asset position (net foreign assets), which results from the difference between receivables and liabilities domestically and abroad.

A current account surplus is thus offset by the **aggregate net borrowing/net lending** position of equivalent size, which means that total domestic savings (S) exceed total domestic investment (I). A current account surplus can also be presented as an increase in the net financial assets (ΔNFA) of the German national economy. Domestic savings thus flow either into domestic investment (I) or into changes in net

financial assets, i.e. changes to net receivables from the rest of the world. Due to this relationship, the current account is alternatively referred to in the literature as a national economy's net capital outflow.

$$(4) CA = S - I = \Delta NFA$$

The **changes to net financial assets** can be broken down into changes in financial assets (ΔFA) and changes in external financing (ΔEF), whereby the change in financial assets can be interpreted as a revision of assets and that in external financing as a change to liabilities.

$$(5) \Delta NFA = \Delta FA - \Delta EF$$

This relationship is of particular importance to the development of the German current account, as it shows that an increase in the current account does not necessarily have to mean an increase in financial assets. Instead, a rise in the current account balance could also be the result of a reduction in external financing, for example, in borrowing abroad. This is the case when, for example, the country in question, the non-financial corporations or other sectors consolidate their balance sheets.

II. VIEW OF THE FINANCIAL ACCOUNTS

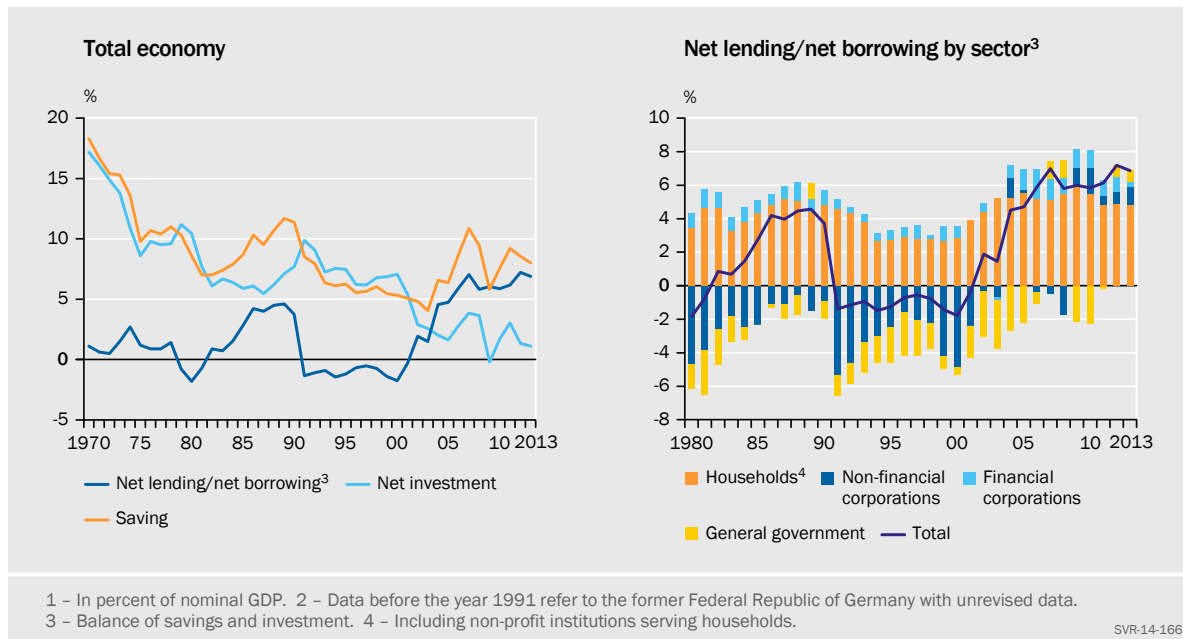
1. Stylised facts

408. Germany has traditionally been a **surplus country**. It has reported a positive current account balance for the majority of years since World War II, with the **major exception to this pattern the 1990s**, which were characterised by the special macroeconomic circumstances of the German reunification. The country has built up a high current account surplus since the middle of the last decade: the longer-term trend of a largely stable national savings rate since the 1980s combined with a considerable drop in the rate of investment since the start of the 1990s. [↪ CHART 49](#)
409. A comparison of the period from 2010 until 2013 with the period from 1996 until 1999, which was still marked by a slight current account deficit, serves for a detailed analysis of the underlying changes in the individual sectors of the German economy. The years 1996 to 1999 saw average **net borrowing** of 0.8% of nominal GDP. [↪ TABLE 17](#) From 2010 to 2013, in contrast, there was a surplus of 6.5%.

Around one third of the change of 7.4 percentage points can be attributed to the private household sector whose net lending increased from 2.8% to 5.0%. Around one fifth can be attributed to the federal government, which reduced its net borrowing from 1.7% to 0.2%. The lion's share of the change is thus attributable to the non-financial corporations sector – in the following named as companies – which converted its net borrowing figure of 2.5% into net lending of 1.0%. Thus all sectors of the German economy contributed to the current account surplus.

↳ CHART 49

Net lending/net borrowing of the total economy^{1,2}



410. As the net lending/net borrowing figure is the difference between savings and net investments, a corresponding comparison of the two periods is also undertaken for these indicators. The national **savings rate** in relation to nominal GDP rose noticeably from 5.7% (1996-1999) to 8.3% (2010-2013). This was due to differing developments in the individual sectors. The private household savings rate dropped slightly from 6.3% to 5.9%; the savings rate as a percentage of disposable income fell from 10.0% to 9.5%. The federal government reduced its negative savings from 1.6% to 0.3%. Corporate sector savings (non-financial corporations) rose from 0.2% to 1.9%.

As a consequence the corporate sector made the largest contribution to the positive change in the aggregate figure. As savings reflect the change in net assets of an economic entity, this reflects an improvement in the earnings of non-financial corporations, which did not result in a corresponding rise in dividends.

411. In terms of **net investments**, a substantial decline was observed for the overall economy. In the period from 1996 to 1999, net acquisition of non-financial assets still stood at around 6.5% of nominal GDP. For the period 2010-2013, it was only 1.8%. The government scarcely contributed to this development; the already low net investment rate fell from 0.1% to 0%. Net investment of private households, which had heavily invested in Eastern German real estate in the 1990s, decreased from 3.5% (1996-1999) to 0.9% (2010-2013). Another considerable decrease was recorded for the corporate sector, from 2.7% to 1.0%.
412. This aggregate perspective provides some **stylised facts**. The increase in the German current account balance is largely due to the corporate sector, which reduced net investment while increasing profits. Private households have also cut back on their investments while maintaining an almost constant savings rate overall. The government has reduced its deficits and thus also contributed to the

increase in the current account balance. The reduction in public net investment scarcely had any effect, even though investments ultimately did not even offset depreciation.

↘ TABLE 17

Net lending/net borrowing by sector (1996-1999 and 2010-2013)¹

		1996 - 1999	2010 - 2013	Change per- centage points
		%	%	
Saving	Non-financial corporations	0.2	1.9	1.7
	Financial corporations	0.8	0.8	0.0
	General government	-1.6	-0.3	1.4
	Households ²	6.3	5.9	-0.4
	Total	5.7	8.3	2.7
Net investment	Non-financial corporations	2.7	1.0	-1.8
	Financial corporations	0.2	-0.0	-0.2
	General government	0.1	-0.0	-0.1
	Households ²	3.5	0.9	-2.6
	Total	6.5	1.8	-4.7
Net lending/net borrowing³	Non-financial corporations	-2.5	1.0	3.5
	Financial corporations	0.6	0.8	0.2
	General government	-1.7	-0.2	1.5
	Households ²	2.8	5.0	2.2
	Total	-0.8	6.5	7.4

1 - In percent of nominal GDP. 2 - Including non-profit institutions serving households. 3 - Difference between saving and investment.

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2. Consolidation process of private households

413. The financing situation of private households has been marked since the beginning of the millennium by an **extensive consolidation process**. The increase in net lending is thus accompanied by a considerable decline in external financing. ↘ CHART 50 UPPER LEFT Households largely used loans to finance real estate purchases until the beginning of the millennium, as well as securities purchases. During the 1990s household debt increased heavily as a result of the real estate boom. Between 1991 and 2000, debt in relation to GDP rose from 52% to 71%. ↘ CHART 50 UPPER RIGHT Absolute lending volume has risen only negligibly since 2000, resulting in a slow decrease in the debt ratio as nominal GDP continued to rise.
414. During the consolidation of their balance sheets, private households significantly decreased their investments in residential properties following the construction boom of the 1990s, and increased their **savings rate**. Measured in relation to disposable income, this figure increased by 1.5 percentage points in the period from 2000 to 2008. However, it has fallen again by 1.3 percentage points since 2009, likely due to the dramatic decline in interest rates. There are many reasons for the increase in the savings rate until 2008. For example, in addition to consolidation efforts, the uncertainty regarding jobs at the beginning of the millennium was likely a contributing factor to precautionary savings. Since the be-

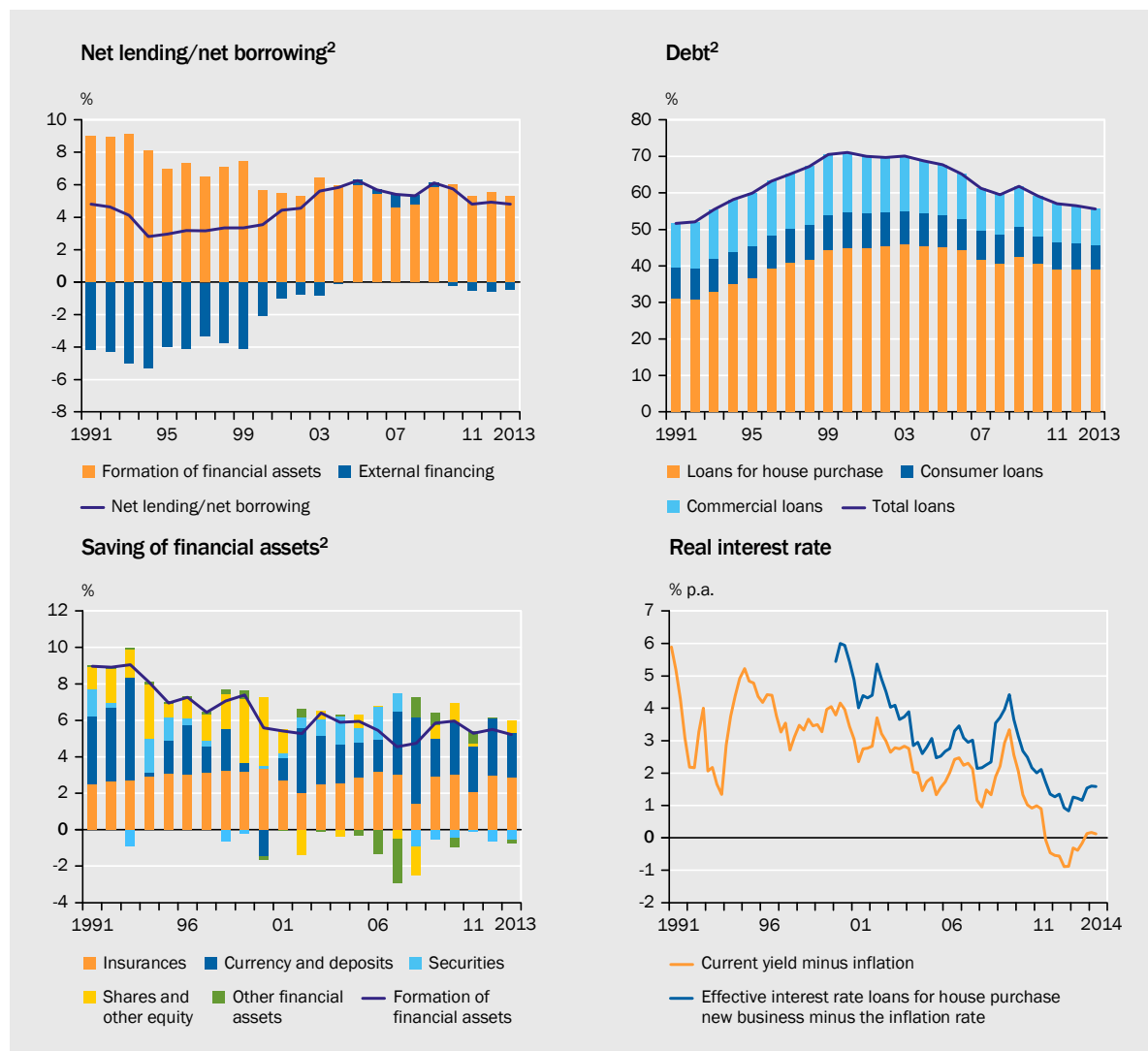
ginning of the millennium, the profits of freelancers and sole proprietorships have risen considerably, which is also reflected in the increased savings rate.

415. In line with the dramatic decline in net investment activity of private households, the sector's net lending increased significantly. However, this did not result in higher **(gross) financial asset formation**. In relation to GDP, the savings accumulated by private households actually declined slightly. Investments in equities, in particular, were reduced due to the negative experience in 2000 as a result of the dotcom bubble. ↘ CHART 50, LOWER LEFT Thus the consequence cannot be drawn that private households invested more of their savings in financial assets instead of real estate. Rather they reduced their debt.

416. Until recently, private household **investment activity** has been modest despite the latest developments on the real estate market. On average in the 1990s, non-financial asset acquisition stood at around 3.8% of nominal GDP, and in 2013 is still far from that at 0.8%. The **extremely low real interest rates** do not ap-

↘ CHART 50

Financing situation of households¹



1 – Including non-profit institutions serving households. 2 – In percent of nominal GDP.

Source: Deutsche Bundesbank

pear to have triggered any major investment activity yet on the part of private households. [↪ CHART 50, LOWER RIGHT](#)

417. It is difficult to provide a **forecast of the saving and investment behaviour** of private households. In general, a rise in the savings rate could be expected due to **demographic development**. This would not necessarily increase the current account balance if investment or consumption activity were to dramatically increase again at the same time. Such a development could arise in particular if the long-term interest rates remain at a low level.

Demographic effects

418. Demographics primarily have **two transmission channels** on the current account. Firstly, the savings rates of private households change with different stages of life. Households attempt to smooth consumption as their income varies across different stages of life (Life cycle model, [↪ EXPERTISE 2011 ITEM 66 ET SEQ.](#)). Secondly, savings motives vary over time as do household's related investment decisions. The motive of real estate purchase plays a considerably greater role for younger households than for older ones (Schunk, 2009; mea, 2008).
419. In the years to come **the sizes of the age groups** within the German population will shift, with an increase in the number of 50 to 65-year-olds. This group has a relatively high savings rate, notwithstanding the fact that the savings rate for 50 to 65 year-olds is lower than that of 30 to 50-year olds. Savings motives also differ for these two age groups. While saving for retirement plays a considerable role for the older cohorts, purchase of real estate is the primary motive for the younger groups. Net lending is thus significantly lower for the younger age group.
420. The **partial effect of demographic structure on the current account** can be econometrically quantified and then used to project the impact of future demographic trends [↪ BOX 20](#). The results illustrate that the change in age structure will likely favour a further increase in the current account by the mid-2020s. The projection reacts strongly to alternative population growth scenarios. [↪ CHART 51 RIGHT](#) If, as has been observed since 2011, net immigration turns out a great deal higher than assumed, the demographic structure can be expected to have a lower partial influence on the current account balance. It could then be assumed that investments in residential property in particular would contribute to an increased domestic absorption [↪ ITEM 439 ET SEQ.](#)

[↪ BOX 20](#)

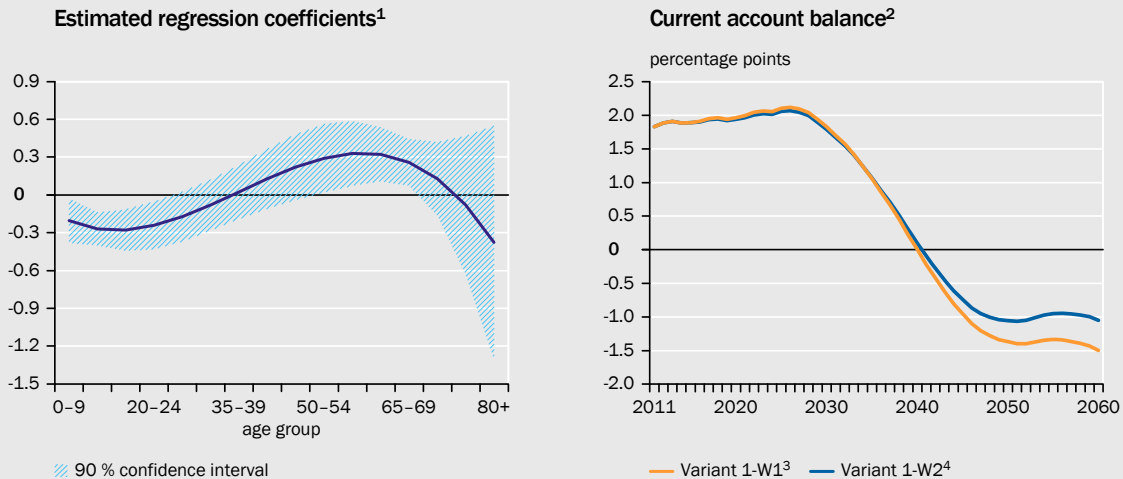
Quantification of demographic effects on the German current account

The quantification of demographic effects on the current account is conducted in two steps. Firstly, a regression model based on panel data for several countries is estimated, in which the ratio of the current account balance to GDP is regressed using a variety of different control variables. The control variables include a detailed age structure in cubic structural form (Fair and Dominguez, 1991). The results of this regression also clearly prove the connection between age and decisions regarding saving

and investment. The partial influence of the younger age group on the current account balance tends to be negative. ↘ [CHART 51, LEFT](#) There is, in contrast, a positive effect from age groups above 40.

↘ [CHART 51](#)

Estimated regression coefficients and the partial effect of the development of population on the current account balance



1 – Own calculations. Results of the regression analysis; dependent variable is the current account balance in relation to nominal gross domestic product. 2 – Own calculations based on the 12th coordinated population projection of the Federal Statistical Office. In relation to nominal gross domestic product. 3 – Annual net migration of 100,000 people since the year 2014. 4 – Annual net migration of 200,000 people since the year 2020.

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In the second step the estimated model and the 12th coordinated population projection by the Federal Statistical Office are used to project the partial effect of demographic change on the German current account. According to these projections the age structure continues to have positive effects on the current account balance, which is actually likely to trend higher during the next ten years. In view of this, the partial contribution of the demographic structure to the current account balance is predicted to rise by around 2 percentage points. ↘ [CHART 51, RIGHT](#) The demographic-related impact on the current account balances would not start a steady decline until the mid-2020s.

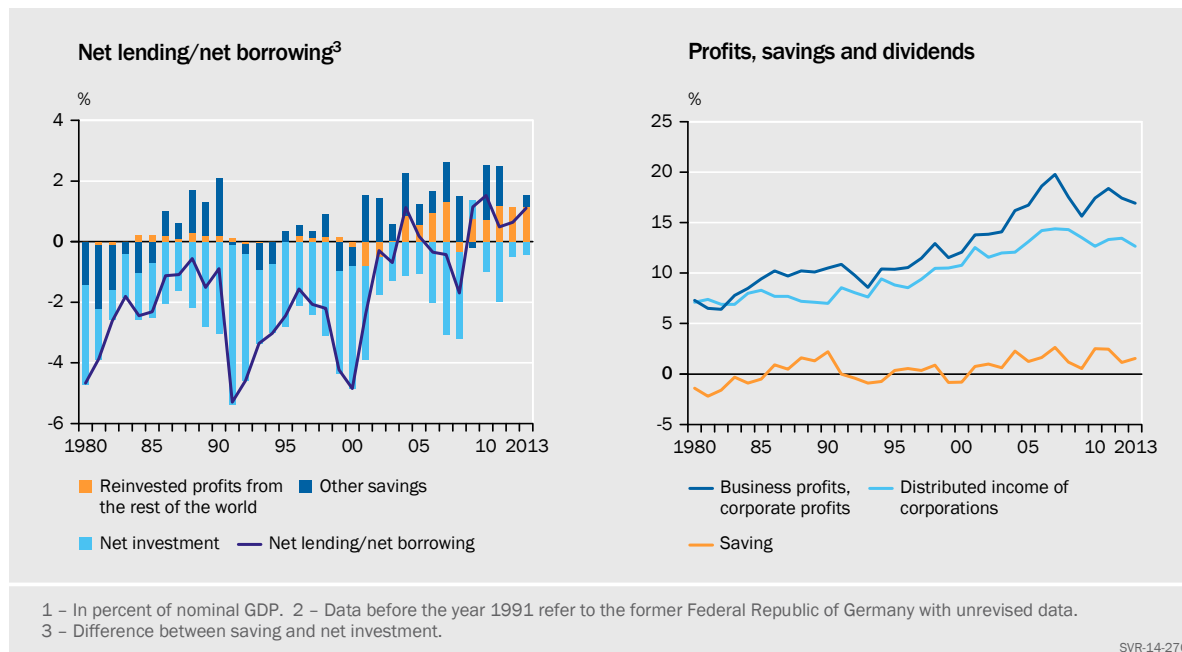
3. Corporate sector: Higher savings with declining willingness to invest

421. The German corporate sector (non-financial corporations) has recorded a **positive balance from net lending** (financing surplus) for over ten years. This finding is unusual as the corporate sector is typically a net debtor in a national economy. Its financing deficits are normally offset by a financing surplus in private households. A positive financing surplus for the corporate sector means that investments can be fully financed through retained earnings (internal financing) and that they still have funds available for financial investment.
422. The main reason for the budget surplus – apart from decreasing investment demand ↘ [ITEM 431 ET SEQ.](#) – was considerably higher **savings** in the corporate sector. ↘ [CHART 52, LEFT](#) The increasing net asset acquisition reflects the significant increase in corporate profits over the last decade, due to the high export demand resulting from the healthy global economy and the practice of wage restraint between 2000 and 2007. ↘ [AER 2013 ITEM 695](#)

Moreover, companies have not adjusted their dividends to the improved earnings situation. ↘ CHART 52, RIGHT The observed increase in corporate savings has two components. Firstly, equity ratios have increased (**deleveraging**). Secondly, a large portion of the profits earned abroad were reinvested abroad in recent years in order to establish and expand production capacities and sales locations in those countries.

↘ CHART 52

Saving of the non-financial corporations^{1,2}

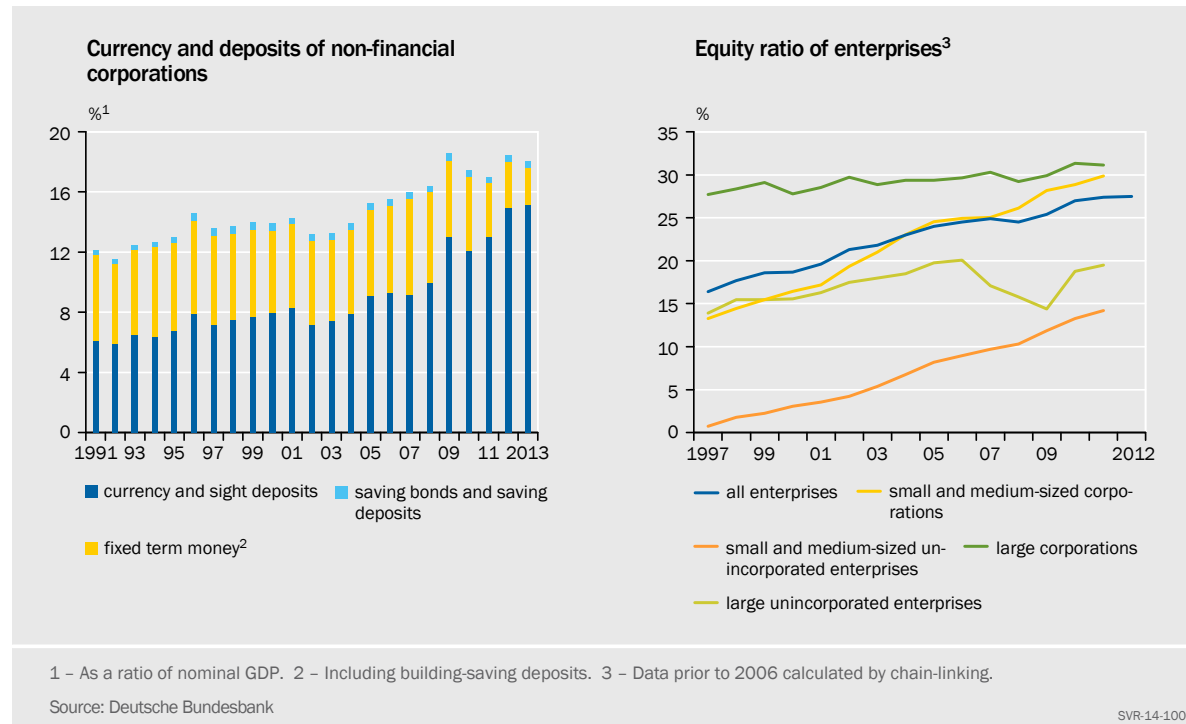


Deleveraging of the corporate sector

- 423. Similarly to private households, companies have employed their budget surplus largely for purposes of **consolidation**. Their financial asset formation rate of 4.9% as a percentage of nominal GDP over the last ten years was not significantly higher than in the 1990s at 4.5%. Their external financing, which then still amounted to 5.2%, was recently a mere 2.0%. At the same time, the corporate sector's **equity resources** improved considerably. The equity ratio rose from 16.3% in 1997 to 27.4% in 2012. ↘ CHART 53, RIGHT The equity ratio increase was more marked for small and medium enterprises than for large companies. This was observed for partnerships as well as for corporations.
- 424. The increased equity ratios are determined by at least two factors. One is that banks' lending standards, particularly in terms of borrower capital resources, have risen as a result of **stricter capital requirements** in accordance with Basel II and Basel III (Deutsche Bundesbank, 2013). Companies have dealt with the increased risk of higher financing costs and potentially more difficult access to loans by increasing their equity ratios.

▾ CHART 53

Financial assets and financing structure of enterprises



A second reason is that **general tax conditions** have favoured rising equity ratios. For example, as part of the corporate tax reform of 2001, the split-rate for retained earnings and distributed profits was abolished and replaced by a standard rate of 25%. This generally favoured retaining earnings. Moreover, the 2008 tax reform further reduced the tax burden on internal financing by lowering the corporate income tax rate to 15% and introducing earnings retention benefits for partnerships and sole proprietorships.

425. The motive of **risk provisioning** was likely also a contributor to increasing equity ratios; refinancing terms and access to bank loans worsened for many companies during the major recession of 2008 and 2009. In 2009, it was increasingly difficult even for healthy companies to obtain loans. This caused many liquidity problems. The increasing risk provisioning is reflected in companies' significantly higher **liquidity preference**. ▾ CHART 53, LEFT Cash and demand deposits of non-financial corporations rose disproportionately to other types of deposits, particularly in 2009.

This increase in liquidity observed since 2009, raises flexibility and makes companies more resistant to shocks as well as changed refinancing terms in periods of recession. This development is not limited to Germany; it also occurred among Asian companies over the past 20 years, with smaller companies building up much more liquidity (Horioka and Terada-Hagiwara, 2013).

German companies' investments abroad

426. In addition to strong deleveraging in the corporate sector, greater company savings have been accompanied to a certain extent with the increase of German companies' **cross-border investment**. In recent years, for example, the lion's share of profits generated abroad was reinvested there. [↪ CHART 52 LEFT](#) This item amounted to almost €33 billion in 2013, which was equivalent to roughly three quarters of corporate savings. This amount increased not only corporate savings, as it was not distributed to shareholders, but also net lending, as these funds were used for foreign rather than domestic investments. Foreign direct investment of German companies is statistically recorded as an increase in financial assets.
427. The **2001 corporate tax reform** favoured the increasing trend among German companies to invest abroad. The previous tax discrimination of dividends and capital gains of foreign subsidiaries was eliminated with the abolishment of the tax credit system, so that foreign investments are now more attractive for German-owned companies. Since then, dividends repatriated by a German parent company as well as capital gains of the subsidiaries have been exempt not only for countries with tax treaties but even unilaterally for tax havens.

Moreover, lowering the tax rate while simultaneously broadening the tax base for investments in fixed assets boosted the relative attractiveness of financial assets. Thus the 2001 corporate tax reform may even have created a strong incentive to accumulate retained earnings in foreign subsidiaries located in low-tax jurisdictions (Homburg, 2000, 2005, 2010).

428. The special institutional framework in some **emerging economies** may have also increased the reinvested profits of German foreign subsidiaries. For example, German direct investors have to collaborate with Chinese companies and form joint ventures in many areas of the economy. At the same time, profit transfers from China to Germany are heavily restricted.
429. German companies' capital exports associated with increased foreign investment are not, however, fully reflected in **foreign direct investment**. These only contain the portion of capital expenditure of German subsidiaries abroad financed by German shareholders. The remaining portion financed by external capital is not reflected in the direct investment statistics. This becomes clear when comparing the significantly higher balance sheet totals of foreign subsidiaries with the foreign direct investment statistics. The additional funds are provided in part by financing companies within the group, located abroad. They issue debt guaranteed by the German parent company for the whole group and pass on the funds obtained in this manner to affiliated companies. Tax aspects, among others, favour these financing structures. It can be assumed that some of these debt instruments are also held by German households and financial intermediaries. Foreign investment caused by German capital export would thus be much higher than reported in the foreign direct investment statistics.
430. In the past, German foreign direct investment met not only with positive judgement; such investment was also interpreted as a sign of Germany's weakness as

a business location (Sinn, 2005). This was based on high labour costs, lack of skilled workers, too much red tape, and the tax regime. As a result, investment in Germany was replaced by higher investment in other countries. By the same token, however, higher foreign investment can also spawn domestic investment, for example when preliminary services or intermediate goods from Germany are required.

Empirical analyses indicate that direct investments are made to tap foreign sales markets (Buch et al., 2005). Moreover, for industrial countries, there is a **complementary relationship** between investment in Germany and abroad (Desai et al., 2005; Arndt et al., 2010; Deutsche Bundesbank, 2014a). The establishment of production and sales facilities abroad thus strengthens investment activity at home.

It can be assumed that the corporate sector **globalisation process** will continue, with a further positive impact on corporate savings. Increasing production capacities abroad will thus yield advantages at national and international level.

↘ ITEM 456 ET SEQ.

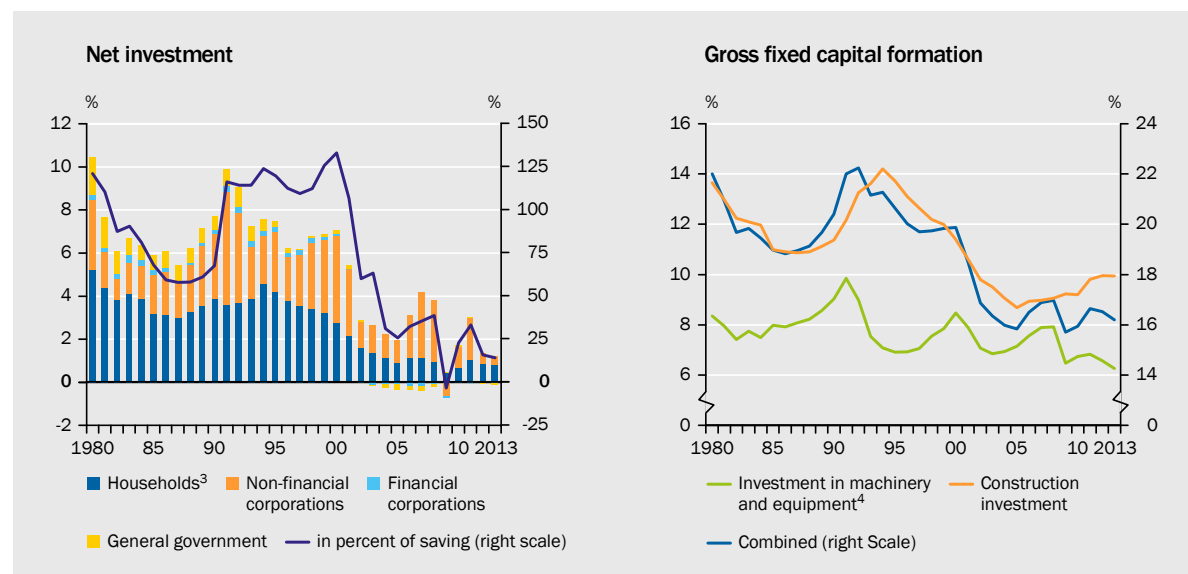
4. Is there investment weakness in Germany?

431. There is frequent public discussion of **investment weakness** in the German economy in connection with the German current account surplus (DIW, 2013, 2014). Indeed, there is no denying that net investment has declined across all sectors since the German reunification. Net investment was considerably lower in recent years than in all the years since 1991, with the exception of 2009.

↘ CHART 54 LEFT

↘ CHART 54

Net investment and gross fixed capital formation^{1,2}



1 - In percent of nominal GDP. 2 - Data before the year 1991 refer to the former Federal Republic of Germany with unrevised data. 3 - Including non-profit institutions serving households. 4 - Including weapon systems (since 1991).

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432. The comparatively low investment activity contrasts with the relatively stable savings rate for the overall economy. Thus, only a very small portion of savings flows into domestic fixed asset formation, in a historical comparison. [↘ CHART 54 LEFT](#) Regarding this basic finding, it must be borne in mind that German savings partially flow into foreign subsidiaries of German companies in the form of direct investment – as already mentioned. [↘ ITEM 426 ET SEQ.](#) This however does not change anything fundamental in the overall findings of a marked consolidation process underway for private households and the corporate sector. In view of the very low long-term real interest rates, the opposite would have been more likely.
433. A low macroeconomic investment rate itself is, however, not an indication of a pathological finding. Therefore, a detailed analysis of the development in particular of gross fixed capital formation in construction, and machinery and equipment is needed. In both areas the investment ratios have declined since the end of the 1990s. [↘ CHART 54 RIGHT](#)

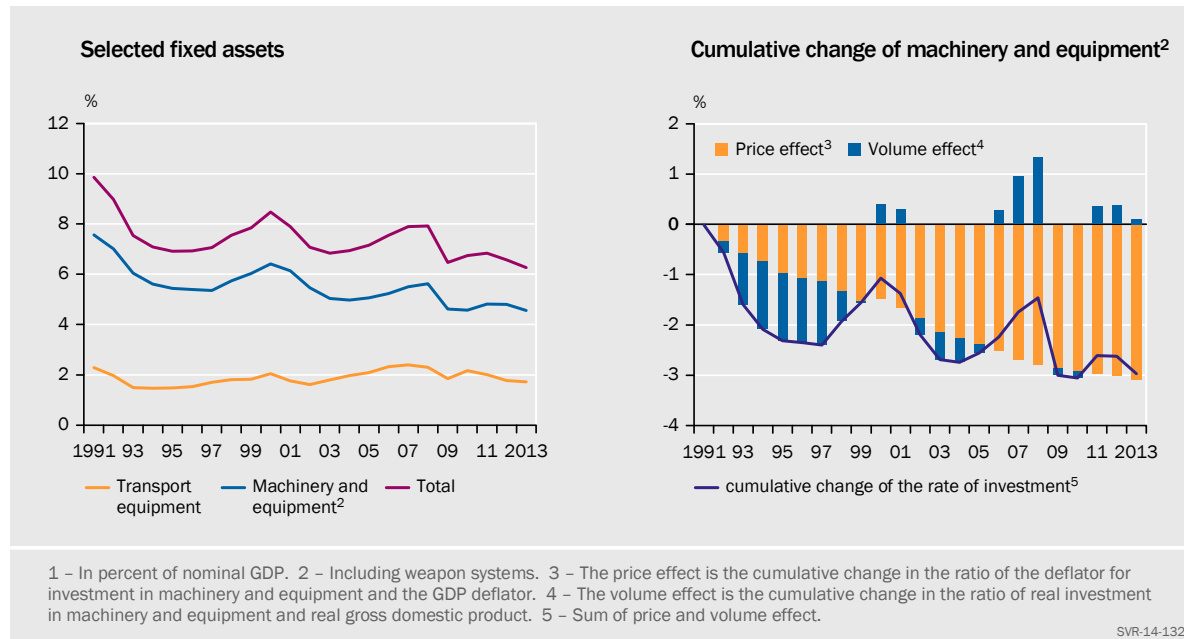
Development of gross investment in machinery and equipment

434. Until 2008 **nominal investment in machinery and equipment** as a percentage of GDP decreased only slightly, apart from cyclical fluctuations. [↘ CHART 55 LEFT](#) In comparison with the rest of the euro area, there has been no below-average development in the past 15 years (BMW, 2013a; European Commission, 2014). It has only declined noticeably since 2009. Consequently, net investment in machinery and equipment scarcely contributed to capital stock growth and thus provided no impetus for potential growth.
435. When nominal investment in machinery and equipment is broken down into a price and a quantity component, a **strong negative price effect** appears. [↘ CHART 55 RIGHT](#) Prices for machinery and equipment have been declining since 1991. While slight price increases have indeed been observed again since 2008, they are nevertheless below the GDP deflator ratios (BMW, 2013a). For example, the ratio of the deflator for gross investment in machinery and equipment to GDP has decreased by 5.4% since 2008. Price developments for data processing machinery and electrical and optical equipment have been the main contributors. This product group accounted for a total of 14% of all gross fixed capital formation in machinery and equipment in 2013. Prices have decreased by more than 45% since 2005 alone. In contrast, prices for other investments in machinery and equipment have increased.

As electronic components and data processing devices are imported primarily from China, the price decline for these goods has simultaneously dampened import volumes. However, with regard to the increasing production costs in China in recent years, it was observed that the price declines for electronic components and data processing devices were recently much less dramatic, resulting in a weaker price-dampening effect on investment in machinery and equipment. Hence the deflator for investment in machinery and equipment has risen slightly since 2010.

↘ CHART 55

Development of investment in machinery and equipment^{1,2}



436. Indications of undesirable structural developments in **real gross capital fixed formation in machinery and equipment** have hardly been observed. The results of the ifo Investment Survey in German manufacturing indicate that manufacturers' investment activity in 2012 and 2013 was not hindered by economic policy. Moderate investment behaviour was due much more to subdued earnings and demand forecasts, for example, due to weaker economic activity abroad (Weichselberger, 2014). Nonetheless, it cannot be ruled out that the recent labour market and social policy decisions have worsened the basic conditions for investment projects (DIHK, 2014). ↘ ITEM 158 Analyses also show that increased uncertainty in 2012 and 2013 had a significantly negative impact on corporate investment activity (AER 2013 box 26; BMWi 2013b). Furthermore, overcapacities in individual sectors that have developed in previous years, for example in shipbuilding, were reduced by lower investments.

Development of gross fixed capital formation in construction

437. Investment in construction declined continuously during the period 1994-2009 and was thus the major contributing factor to the decline in the macroeconomic investment rate. ↘ CHART 54 RIGHT This trend was, however, related to the construction boom in Eastern Germany at the beginning of this period. Construction activity increased considerably at that time due to huge subsidies and extensive public investment (AER 1991 item 83 f., AER 2013 box 26). In the past decade the real estate market was dampened as a result of the discontinuation of the homeowner's subsidy and the declining balance depreciation method for residential real estate.
438. With regard to **construction investment**, residential and non-residential buildings (public and commercial construction) have experienced diverging trends. Following a downward trend, which began in the mid-1990s and extend-

ed to all areas of construction, investment in residential building construction stabilised from 2003 and has actually risen again considerably since 2009. Momentum for non-residential buildings has remained rather slow in contrast. Net investment in this area has been close to zero in recent years, and as with equipment and machinery investment, has made only negligible contributions to increasing the nation's capital stock.

439. Recent years have seen new construction and rehabilitation activity in **residential properties** driven by demographic effects, among others. For example, the population migration to cities has resulted in a significant increase in real estate demand in these densely populated areas despite the general population decline. Moreover, higher risk aversion among investors as a result of the financial and euro crises as well as low interest rates appears to have stimulated demand for real estate (AER 2013 item 842 et seq.). Real estate prices have recently risen considerably overall, primarily in major cities.
440. The development of the **German real estate market** is an important determinant of the German current account. A considerable part of the increase in the German current account balance until 2007 is attributable to the cool-down at that time in the German real estate market following the construction boom of the 1990s. [↪ BOX 21](#) In past few years, it was also evident that the recovery recently underway in the real estate market had reduced net lending of households and thus had a dampening effect on the German current account balance.
441. **Economic policy measures** which promote real estate market development could thus contribute to reducing the current account surplus. However, the German Council of Economic Experts sees no reason for this. Regulatory interventions such as the rent price ceiling are counterproductive. They have a negative effect on investors' return expectations. [↪ AER 2013 ITEM 861 ET SEQ.](#) Moreover, frequent market intervention generally increases uncertainty about long-term investments, particularly in construction. Raising the real estate transfer tax (*Grunderwerbsteuer*) has also had negative effects, as seen recently in a number of German federal states. [↪ AER 2013 ITEM 868](#)

[↪ BOX 21](#)

Effect of the real estate market on the current account

The close relationship between the development on the German real estate market and the change in the current account balance is often not mentioned in the public discussion. However real property prices and the current account balance are strongly negatively correlated. [↪ CHART 56 UPPER LEFT](#) This observation is complemented by the experiences of the recent real estate booms in the US, Ireland and Spain. Sharp property price increases coincided with high current account deficits. As real estate investments of private households and companies absorb part of domestic savings, they have a negative effect on the current account balance.

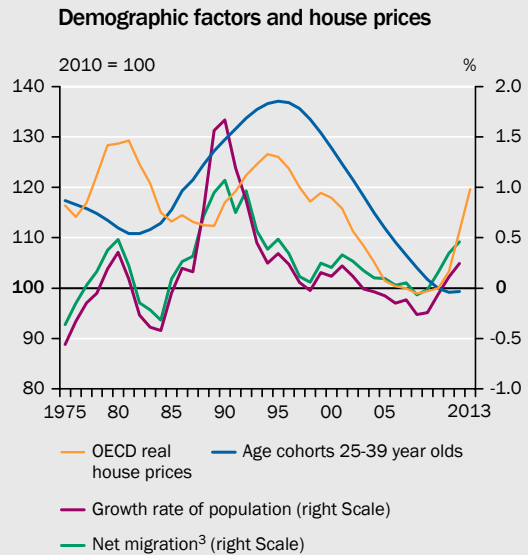
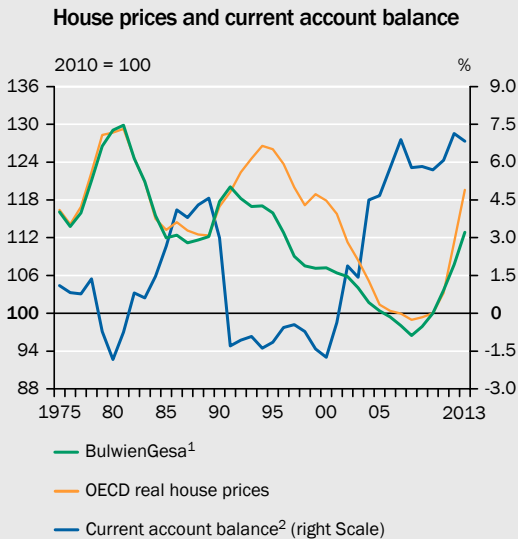
This indicates that the same factors drive developments on the real estate market and in the current account. For the discussion on the German current account surplus it is important to understand whether these factors involve cyclical effects or other determinants. One determinant could be de-

mographic change. For example, demographic variables – such as population growth, net migration and the proportion of 25 to 29-year-olds in the total population – are strongly correlated with real property prices as an indicator of real estate market development. [↪ CHART 56 UPPER RIGHT](#)

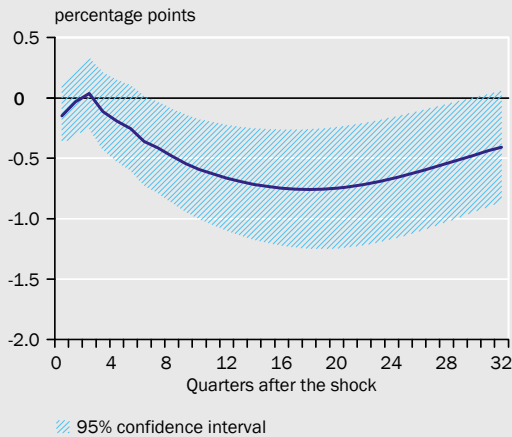
To analyse the way in which increases in property prices and the current account balance are related a vector autoregressive model (VAR model) is estimated. Drawing on Iacoviello (2005), the VAR model is estimated using the cyclical components of the logarithmised German GDP (HP filter), the rate of change of the GDP deflator, the interest rate differential of 10-year German and US government bonds, the logarithm of the OECD housing price index, the logarithm of price competitiveness, as well as the current account in relation to GDP and a constant. Each variable was entered into the model with four lags. The estimate is based on quarterly data with the estimate period dating from the beginning of 1971 to the beginning of 2014. The structural effects of real estate price increases are identified by means of a Cholesky decomposition in the above-stated variables. The real estate demand shocks identified using the model can be interpreted as real estate price increases which originate in the real estate market – for example due to demographic factors.

[↪ CHART 56](#)

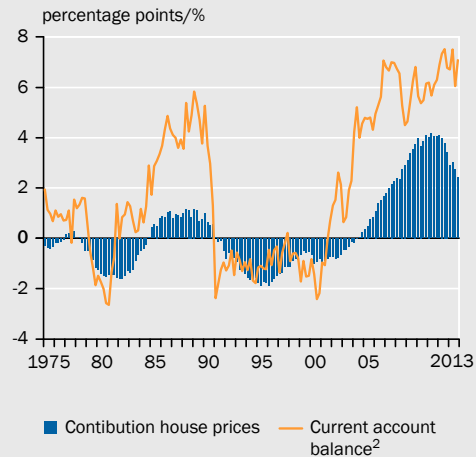
House prices and current account balance



The reaction of the current account balance to an exogenous housing price shock



Contribution of housing price shocks to current account balance



1 – BulwienGesa AG, price index for terraced houses and owner-occupied apartments of 125 cities. 2 – In percent of nominal GDP. 3 – In percent of population.

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It can be shown that real estate demand shocks are accompanied, with a delay, by a deterioration in the current account. ↘ [CHART 56 UPPER LEFT](#) The literature discusses a variety of transmission channels for this. For one thing, a shift in sectoral resources such as from exports to the construction industry may occur (Gete, 2010). For another, real estate investments are frequently financed by loans, with the loans stemming at least in part from other countries' savings (Punzi, 2013). Moreover, wealth effects may have an expansionary effect on consumption as a result of rising real estate prices and may lower the current account balance through import demand (Iacoviello, 2005, 2011). Moreover, these processes can be amplified through subjective elements in expectation formation about future real estate price development (Adam et al., 2011).

A historical shock decomposition is conducted to gauge the extent to which real estate price fluctuations have impacted the German current account in the past. It shows how much of the current account balance can be explained by real estate demand shocks. It is found that at least five percentage points of the increase in the current account balance from the end of the 1990s until 2008 can be explained by the factors that contributed to weak development of real estate prices. ↘ [CHART 56 LOWER RIGHT](#) This value, however, has to be interpreted as an upper bound, since this study may not account for important factors. In the past two years, the recovery of the real estate market has had a less dampening effect on the current account.

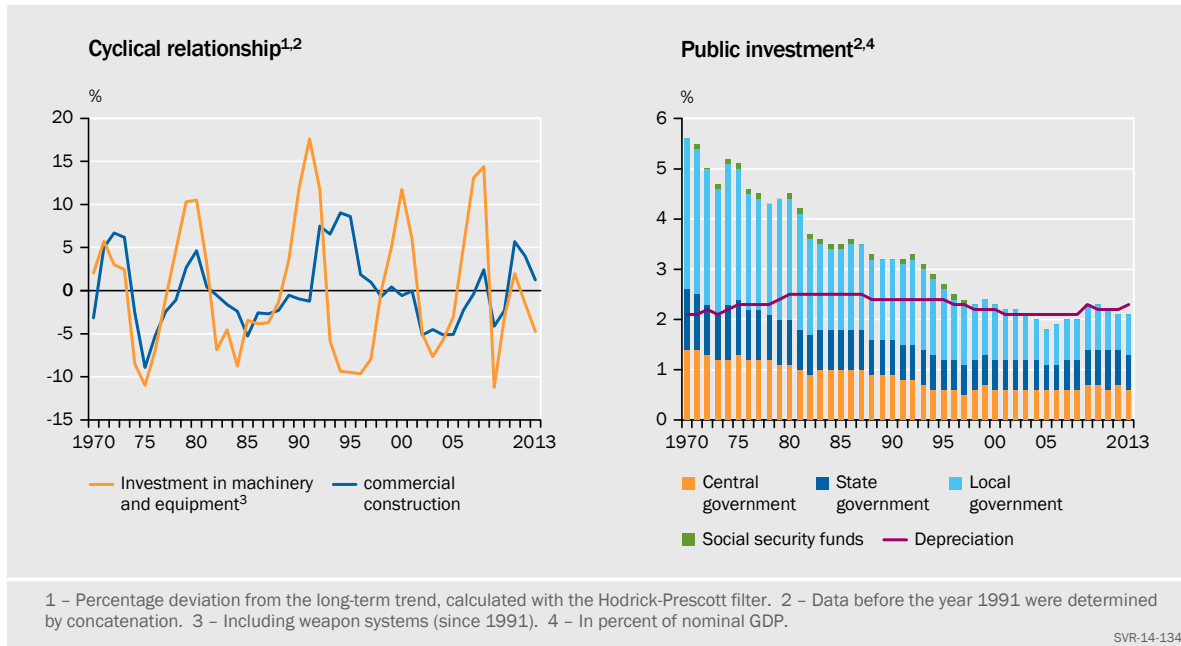
442. Over the last 25 years the development of **commercial construction** has become disconnected from the cyclical development of investment in equipment and machinery. ↘ [CHART 57 LEFT](#) Overall, the investment of commercial construction has fallen since the mid-1990s. Whether this is more of a normalisation after the construction boom at the beginning of the 1990s or whether it has other structural reasons remains open for debate.

One structural reason for the weak development in commercial construction could be German companies' offshoring of production. The increase in “just in time” production could also be a factor. However this is offset by the increasing significance of the service sector, which exhibits a particularly high level of construction. There have not been any empirical tests to date for a comprehensive assessment of these opposing trends.

443. The low private investment rate **cannot be described as a pathological investment weakness** at present. However, total **private capital expenditure** could be increased with better basic conditions. These include, for example, appropriate infrastructure provision, tax policy, and efficient implementation of the energy transition (Energiewende). No attempts should be made to obsessively strive for a certain investment rate. Focusing too hard on such objectives can result in distortions and bad macroeconomic investments.
444. **Public investment** totalled at least €61 billion in 2013. This corresponds to around 2.2% of nominal GDP. The investment share of municipalities, above all, has declined over the last 40 years. ↘ [CHART 57 RIGHT](#) However, it is noteworthy that municipalities' figures – whose gross fixed capital formation was 0.45% of GDP in 1992 – are only comparable to a very limited extent over time due to privatisa-

↘ CHART 57

Cyclical relationship between gross fixed asset investment and public investment



tion of sanitation and waste disposal. Public net capital formation has actually been negative overall since 2003.

On the one hand too little was invested in maintenance of traffic infrastructure. But on the other hand a large part of investment in the 1970s and 1980s went to municipal buildings. Some of these buildings will no longer be needed in the future due to changing demand for public services and an aging society. The direct consequence is negative net capital formation. The German Council of Economic Experts sees at best an additional need for investment, for example, in civil engineering, but which should scarcely exceed a low single-digit billion figure per year. ↘ AER 2013 ITEM 551

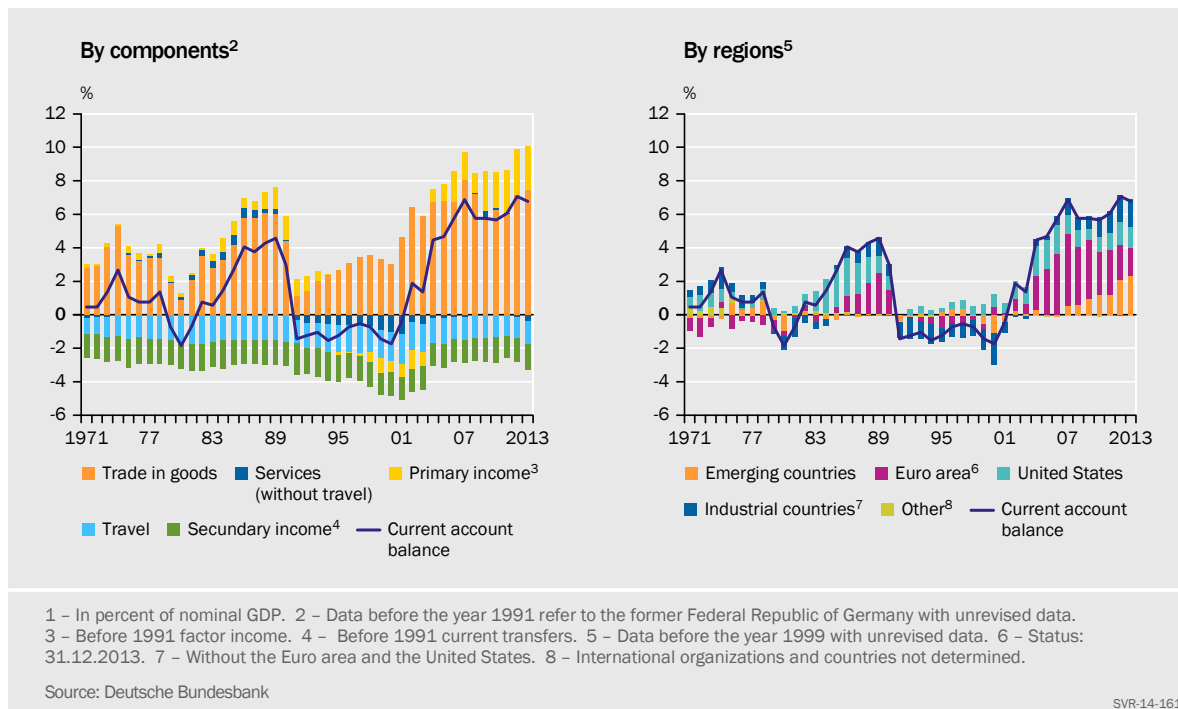
III. THE REAL ECONOMIC ASPECT OF THE GERMAN CURRENT ACCOUNT

1. Overview

445. The savings, investment and financing transactions discussed thus far correspond to real economic transactions reflected in the current account. In the following, these will be analysed in more detail in order to obtain further explanations for the increase in the German current account surplus from this perspective. It is evident that the strong rise in companies' savings due to the good earnings situation corresponds to the healthy export economy, while wage moderation having a somewhat dampening effect on consumer demand until 2007 and thereby affecting imports.

↪ CHART 58

Current account, by components and regions¹



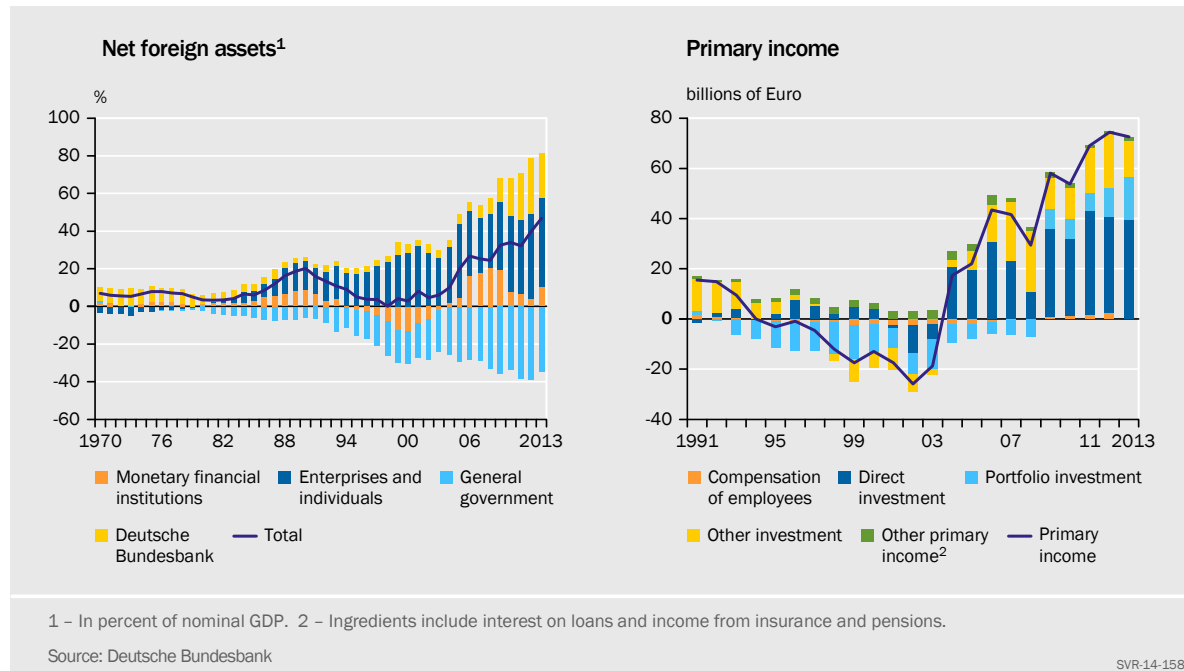
446. The current account balance increase in the first half of the 2000s was primarily due to surpluses compared to euro area member states. Two regionally opposing movements have been identified since that time. ↪ CHART 58, RIGHT The decrease in surplus compared to the flagging euro area was almost fully offset by surpluses compared to emerging economies and to a smaller extent the United States.

447. **Trade in goods is the most significant factor** in the sub-accounts. Net exports of goods, which has been a positive figure since the 1950s, show great fluctuation over time. Travel and the secondary income account, in contrast, are quite stable and consistently in deficit. Contributions from the remaining services are comparatively low. The changes observed in the current account balance in the past thus stem from corresponding changes in the balance of trade. ↪ CHART 58 LEFT

448. Moreover, the **income account** has risen considerably in past few years, amounting net to at least 2.7% of GDP in 2013. This is an understandable development as Germany's net foreign assets have now risen by more than €1.3 trillion due to the current account surplus of several years, and now generate significant factor income. ↪ CHART 59 LEFT Revenue from German foreign direct investment at around €40 billion each year constituted around one half of factor income in the past three years. ↪ CHART 59 RIGHT However, around 75% of the revenue from German foreign direct investments was not transferred to Germany but ploughed back through re-investment abroad. ↪ ITEM 426 ET SEQ.

↳ CHART 59

Development of net foreign assets and the primary income



2. Determinants of foreign trade

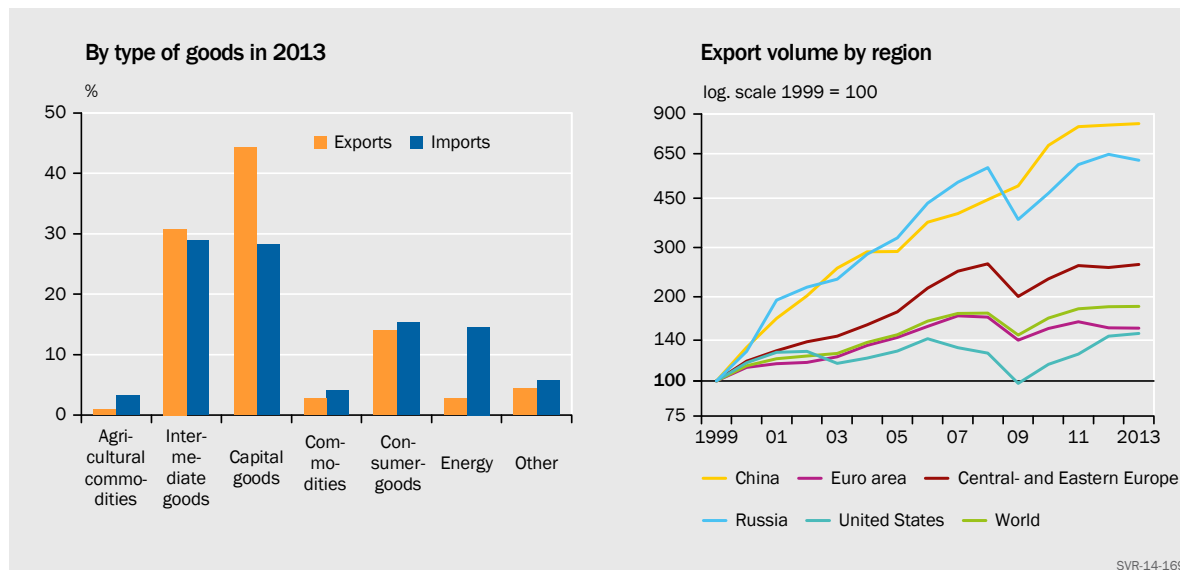
449. The tremendous increase in the German trade balance since the 1990s is largely due to the interaction of **three factors**. Firstly, German exporters achieved considerable sales growth in the 2000s due to the global economic upswing, and in particular to the catch-up process in the Eastern European emerging economies and China. Secondly, the price competitiveness of German companies steadily improved after the strong appreciation that lasted until 1995. This is due both to the favourable exchange rate development and to the increase in competitiveness through the globalisation strategy of German exporters and moderate wage development. Thirdly, the moderate wage development likely dampened domestic demand via the effects on income and so also the demand for imports.

Impetus due to rising global demand

450. German exports are **strongly dependent on the global economy**. A number of empirical studies on export demand elasticity indicate that with a rise in global production of around 1%, German exports increase by considerably more than 1% (IMF, 2005; Stephan, 2005; Danninger and Joutz, 2008; Thorbecke and Kato, 2012; Breuer and Klose, 2014). On the other hand, however, they are also strongly hit when global growth decreases, as proved by the recession in 2008 and 2009. Compared to other European economies the German economy stands out with its high export demand elasticity (Breuer and Klose, 2013).
451. The German export economy's **strong dependency** on the global economy probably stems from its specialisation pattern. It predominantly offers goods which are in particularly high demand in growth phases. These include investment and intermediate goods such as vehicles, machinery and chemical industry

↘ CHART 60

Structure of German foreign trade



products ↘ CHART 60 LEFT. Goods exports differ considerably from goods imports, which are dominated by consumer goods and, above all, commodities. This enabled an increase in exports to the rapidly growing emerging economies, primarily China and Russia. Thus, the share of exports to China rose from 1% to 6%, while the portion of exports to the euro area fell from 49% in 1999 to 41% in 2013, despite heavy increases in export volumes. The share of exports to Central and Eastern European emerging economies as well as to Russia rose during the same period from 8% to 13% ↘ CHART 60 RIGHT

Price elasticity and competitiveness

452. In addition to high demand elasticity, German exports and imports are characterised by a comparatively low price elasticity (IMF, 2005; Stephan, 2005; Breuer and Klose, 2014). As a result the decline in demand after a price increase is relatively moderate. This is likely mainly due on the **export side** to the fact that German exporters have successfully specialised in premium products, especially in the automotive industry, as well as in select product niches, primarily in mechanical engineering and the chemical industry. Such products are highly differentiated and are thus much less likely to face price competition.
453. The low price elasticity on the **import side** is initially likely due to the fact that a large portion of imports are **export-driven**. Both imported preliminary products and the commodities needed to produce export goods depend mainly on the development of exports and thus barely fluctuate in reaction to changes in import prices. In addition, production in some sectors was almost completely replaced by imports in recent years. One of these is the textile industry. There is practically no domestic substitute any more for these goods, meaning that price increases only trigger moderate quantity reactions.
454. However German imports and exports are **not completely inelastic in terms of price**. Time series studies and model-based analyses show that while quanti-

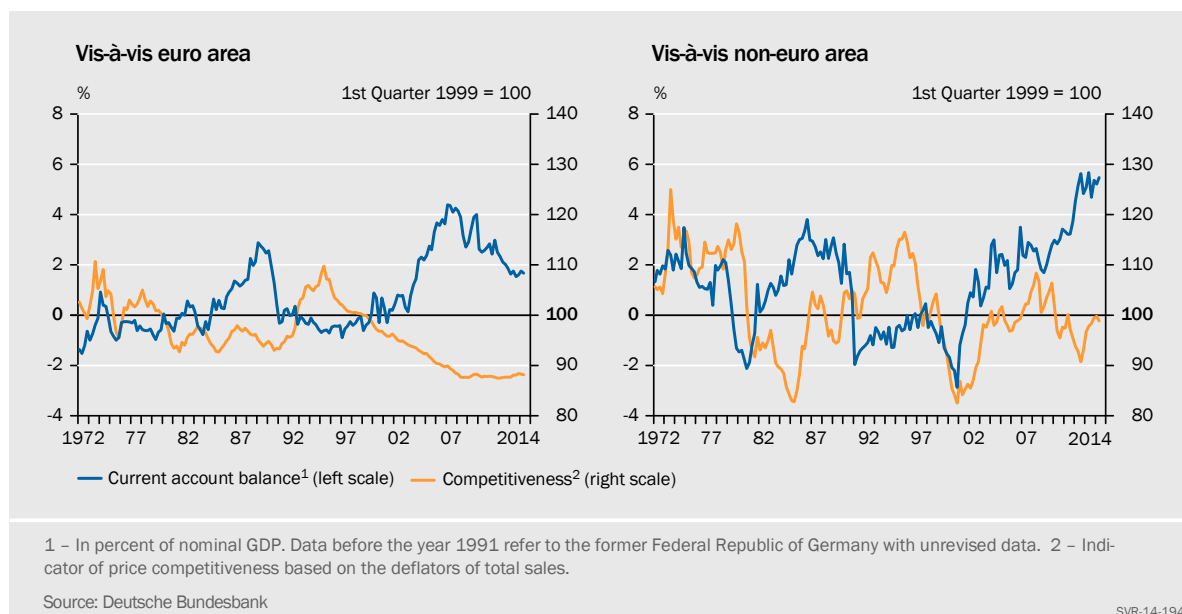
ty reactions are small, they are statistically significant. The German economy's price competitiveness – defined as the real exchange rate based on the deflators of total sales – has improved greatly in the past 15 years and thus noticeably impacts the current account, despite the overall low price inelasticity. [↘ CHART 61](#)

From the point of view of foreign consumers, price competitiveness of German goods has increased significantly since the mid-1990s, and since the beginning of the 2000s has remained near its peak of the 1980s. Compared to the euro area, German companies actually increased their price competitiveness even further until 2012. Four points are often discussed in relation to this development: exchange rate development, internationalisation of value chains, economic reforms and wage moderation.

455. **Exchange rate development** indicates a special feature of the currency union, particularly since 2010: the nominal euro exchange rate is influenced above all by developments between the overall euro area and the rest of the world, with nominal exchange rates between euro area member states fixed. For example, the loss of confidence in the euro area from 2010 to 2012 in particular resulted in a significant depreciation of the euro. This means that Germany's real foreign exchange rate cannot react appropriately to developments in the German current account. A completely different development would have likely resulted for Germany with a national currency. The euro's depreciation had noticeable effects on the current account balance [↘ ITEM 460 ET SEQ.](#)
456. In addition to the positive effects of the common currency, the German export sector's competitiveness is likely to have increased due to a very clearly pronounced **globalisation of value chains**. An increasing share of domestic preliminary production is being substituted by externally procuring preliminary products from foreign suppliers (**outsourcing**). At the same time, more and more companies are taking advantage of setting up their own branch offices abroad via direct investments and using them to procure such preliminary prod-

[↘ CHART 61](#)

Current account and price competitiveness



ucts for the later value-adding process (**offshoring**). The rising significance of outsourcing and offshoring is evident in the continuously declining share of domestic added value per export unit over the last 20 years. [↘ CHART 62 LEFT](#) Production areas that are no longer competitive, above all those that are labour-intensive, are relocated abroad.

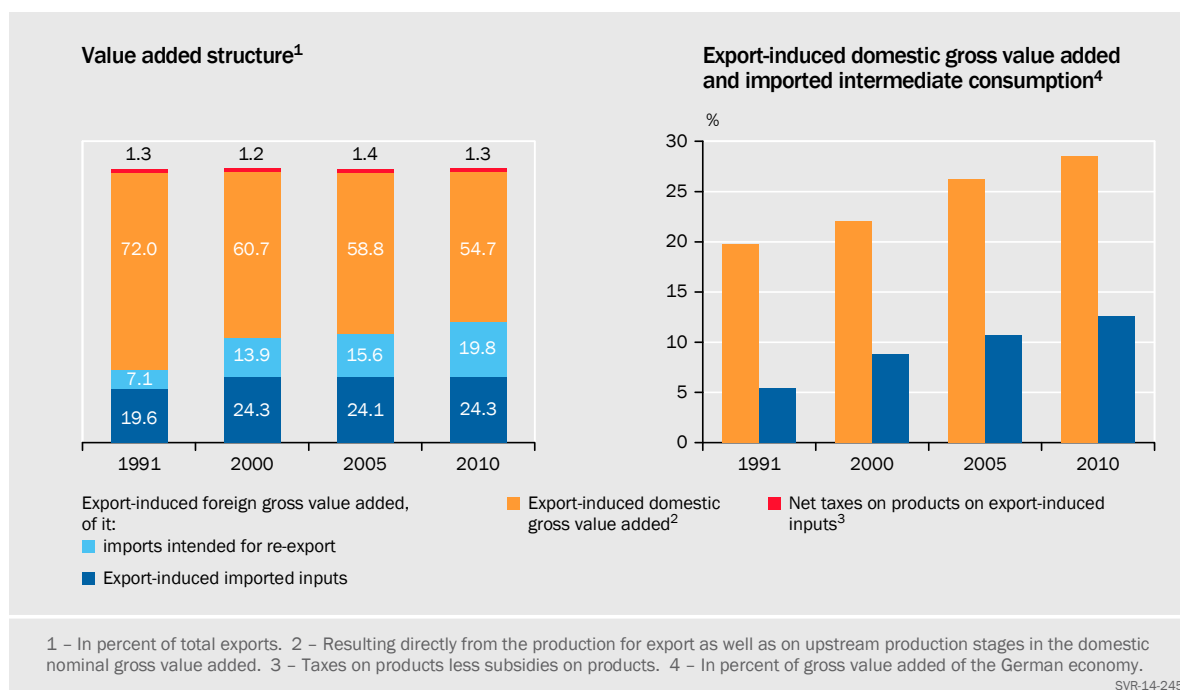
457. The **adaptation of the production structure** by outsourcing part of the value chain abroad may have contributed to Germany's current account surplus in recent years. Global demand for end products exported by Germany has increased due to their cost-effective and in some cases high-quality intermediate goods from abroad. The considerable rise in export-driven domestic gross value added as a ratio of total gross value added over the last 20 years is indicative of this. [↘ CHART 62 RIGHT](#) The “demand effect” for German exports has thus significantly overcompensated the “outsourcing effect” of imported intermediate goods.

German companies' recent investment and profit distribution policies resulted in a current account surplus from the production structures described. [↘ ITEM 421 ET SEQ.](#) Both the German economy and the rest of the world benefited from this development. For example, despite a higher import content of German exports, German value added increased. As a result of the imported intermediate goods, jobs and value added are also created abroad, (Aichele et al., 2013).

458. The **economic reforms** of the past 15 years have also directly and indirectly contributed to the improvement in companies' competitiveness. For example, the tax reforms of 2001 and 2008 lowered the tax burden for companies; there was a reduction in effective average tax rates and thus also in costs of capital. This was primarily achieved by lowering the corporation tax rate from up to 40% to 15%. The tax reform of 2001 also encouraged German foreign direct invest-

[↘ CHART 62](#)

Value added structure of exports



ment (Feld and Heckemeyer, 2011). [↪ ITEM 427 ET SEQ.](#)

Moreover, the reforms of the social security systems until 2008 also contributed to a reduction in non-wage labour costs. Recently attempts were made, using quantitative models, to gauge the impact of the German economic reforms on the current account. [↪ BOX 22](#)

[↪ BOX 22](#)

Impacts of the German reform policy from 1999 to 2008

The study by Gadatsch et al. (2014) quantifies the macroeconomic impacts of fiscal policy and labour market reforms of the years 1999 to 2008. The study uses a dynamic stochastic general equilibrium (DSGE) model, which is similar in its basic structure to the New Area-Wide Model (NAWM) that the ECB employs for its policy analyses ([↪ AER 2013 BOX 10](#)), but which models the labour market and fiscal policy in considerably more detail. For example, the labour market is characterised by search frictions and differentiation is made, between the short and long-term unemployed. This enables reforms to be adequately reflected in the quantitative analysis. The most important reforms are simulated in line with their timeframe of implementation to estimate the effects:

- the fiscal devaluations undertaken in 1999-2003 and 2007 by reducing non-wage labour costs and raising indirect taxes,
- the corporate tax reforms of 2001 and 2008 with a lowering of corporate income tax,
- the lowering of income tax in 2001, 2004 and 2005,
- the reform of job centres (Hartz III) in 2004,
- the reform of unemployment insurance by reduced claim periods and combining unemployment benefits and social security (Hartz IV) in 2005.

The model analysis of the structural reforms listed above identifies positive macroeconomic effects on the German economy ([↪ CHART 63](#)). In comparison to the counterfactual situation without structural reforms, GDP, private consumption and investments are respectively around 2%, 1.5% and 1% higher in the medium term, and the long-term reduction in the rate of unemployment is around 1.5 percentage points. At the same time, the German economy's terms of trade significantly improved and German companies' price competitiveness rose. The Hartz IV reform had the largest impact by far.

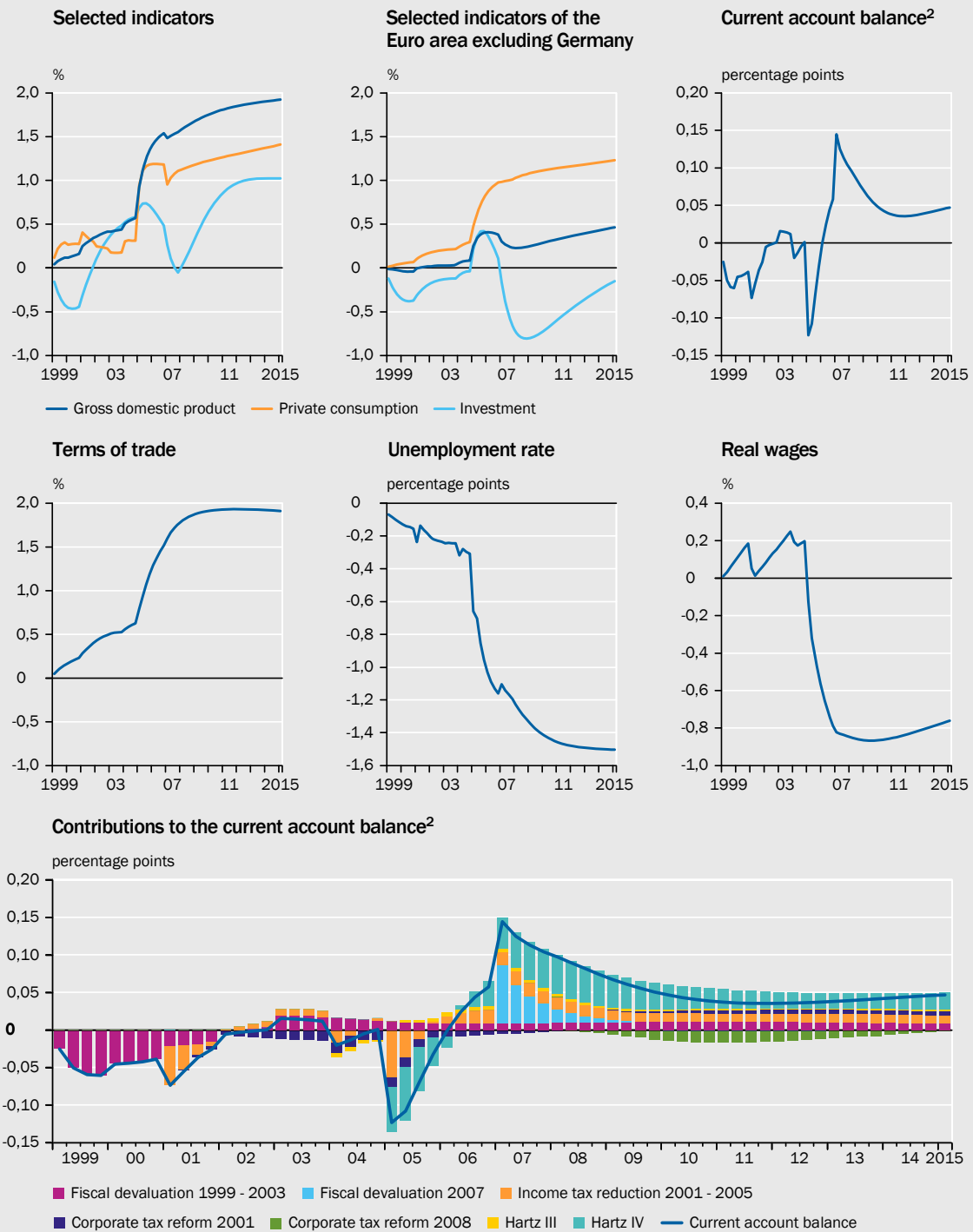
Despite considerable improvement in competitiveness, the reforms had only a limited effect on the current account as import demand also increased with the rise in aggregate income. This result contradicts the findings of the study by Kollmann et al. (2015), which identifies a significant positive impact of labour market reforms on the German current account balance. The model used in that study, however, does not reflect such a detailed labour market, so the reforms could only be reproduced in a strongly stylised manner in that study.

Moreover, it is evident that the structural reforms contributed to German wage moderation after 2005. However, this had no dampening effect on import demand, as the rise in employment overcompensated for the decline in real earnings. Thus the effect of the reforms on other countries – in this case the rest of the euro area – was slightly positive on balance, and is in line with other empirical studies (Felbermayr et al., 2013).

Overall the results indicate that Germany's structural reforms do not constitute a “beggar-thy-neighbour” policy; in contrast to targeted depreciation of the nominal exchange rate in order to gain export demand at the expense of other countries.

CHART 63

Consequences of economic political reforms in Germany¹



1 – Own calculations. All variables are presented as deviation from the counterfactual situation without structural reforms.
 2 – In percent of nominal gross domestic product.

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459. In the discussion on the improvement of the price competitiveness of German exporters the impact of **wage moderation** is often highlighted. The real wage development negotiated between the parties to the collective agreement remained behind productivity growth from 2000 to 2007, thus supporting job creation and inversely the reduction in unemployment. [↪ AER 2013 ITEM 695](#) A dis-

gregated analysis of wage development in different sectors of the economy, however, shows that wages only fell in the non-tradable goods and tradable services sectors, while rising almost constantly in the 2000s as well, particularly in the tradable sector of manufacturing (Dustmann et al., 2014). However, productivity growth was very high in that area resulting in a significant decline in unit wage costs.

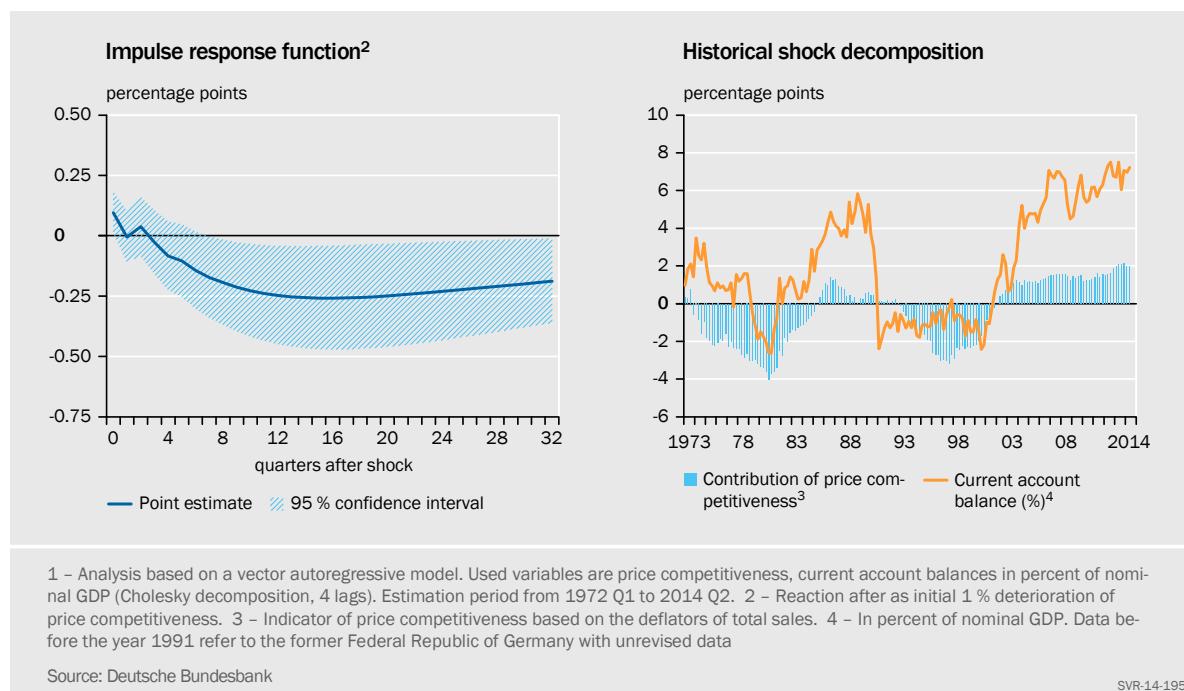
460. Time series econometric modelling can be used to gauge the **effect of a deterioration in price competitiveness** of German companies on the German current account. The results show that the initial impact on the German current account is positive, although it causes the current account to deteriorate significantly in the long term. [↪ CHART 64 LEFT](#) The reason is the persistence of a one-time deterioration in price competitiveness. The long-term decline determined in the current account balance – as a result of an initial deterioration in price competitiveness by 1% – amounts to 0.25 percentage points.

This clearly indicates again that the German current account is not immune to a deterioration in price competitiveness. However, the elasticity should be treated as an average value of the past 40 years. It is reasonable to assume that many more companies hedge against exchange rate risk nowadays than in the 1970s and 1980s, rendering current price elasticity below 0.25. Moreover, the **globalisation of value chains** is likely additional protection against exchange rate risk. [↪ ITEM 456 ET SEQ.](#)

461. The results indicate that the improved competitiveness has delivered increasingly positive contributions to the current account balance since around 2002. [↪ CHART 64 RIGHT](#) This is particularly true for the recent development. For example, the strong depreciation of the euro in 2011 and 2012 caused the German current account to rise by about one percentage point in 2013.

↪ CHART 64

Influence of price competitiveness on the current account balance¹



Wage moderation and private consumption

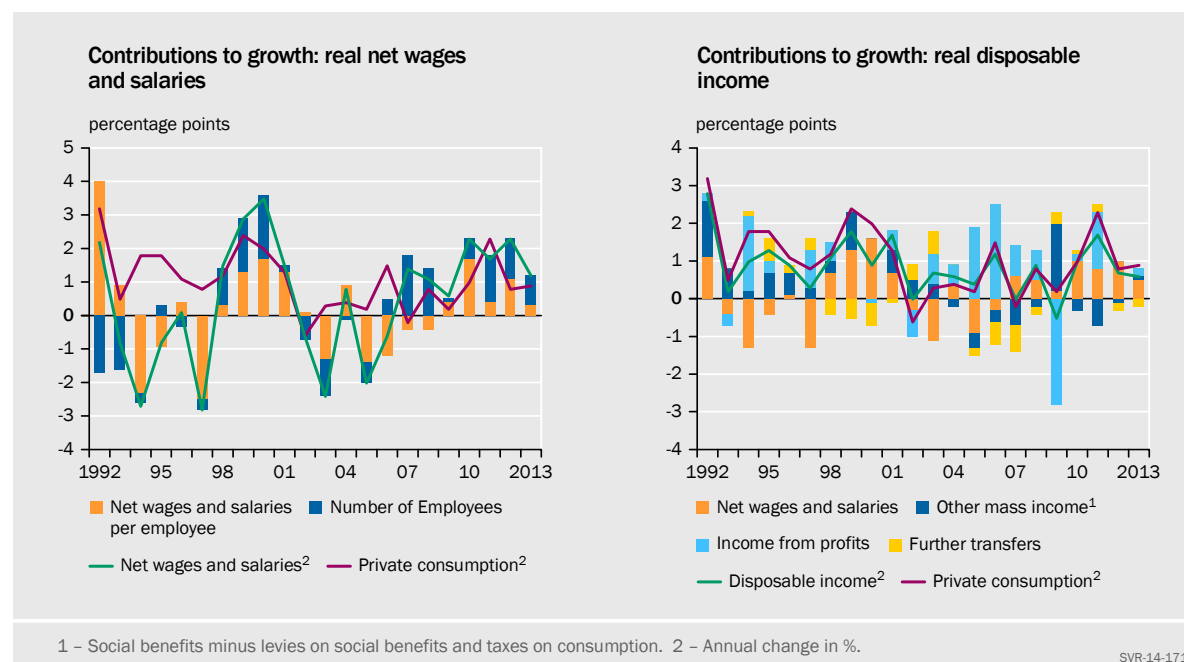
462. The term **wage moderation** is typically associated with the period from 2000 to 2007, when there was a sharp downward trend in wages per capita. [↪ CHART 65 LEFT](#) This development is often cited as the reason for the stagnation in consumer demand during that period and the substantial increase in the current account balance [↪ AER 2010 ITEM 219 ET SEQ.](#) This interpretation is based on Keynes' view that disposable income is the key determinant of private consumption. [↪ AER 2008 BOX 3](#) Empirical analyses show that roughly 20 to 35% of private households in the US and Europe do indeed base their consumer spending entirely on disposable income ([↪ AER 2013 ITEM 221](#); Coenen and Straub, 2005; Coenen et al., 2008, Ratto et al., 2009; Cogan et al., 2010).

The majority of households, however, seem to smooth their consumption over time and attempt to compensate for fluctuations in disposable income by adjusting their savings rate. Only when their **permanent income** falls does consumer demand change (Friedman, 1957). This could also be a reason for the “weak consumption” in Germany in the first half of the 2000s. Weak economic growth and rising unemployment may have led people to adjust their expectations.

463. **Total net wages and salaries** are the decisive factor for aggregate consumer demand by private households which is primarily determined by disposable income. There are two components of total net wages and salaries. First, the **number of people employed**. With constant wages, an increase in the number of people working leads to growth in total net wages and salaries. The second component of total net wages is the **net wage per employee**. During the period of wage moderation, there was a decrease in both these components, which caused total net wages to fall.

↪ CHART 65

Relationship between disposable income and private consumption



Nonetheless it was the development of net wages per employee that made the larger contribution to the decrease in total net wages from 2002 to 2006. Wages per capita continued to fall in 2007 and 2008, but employment rose more quickly at the same time. This meant that total net wages began to increase once more. Real net wages per capita have been increasing at an average of 0.8% since 2009. As the number of people employed has also grown continuously since 2009, total net wages and salaries saw even stronger average growth of 1.6%.

464. However, the trend in aggregate private consumption is primarily determined by the **development of disposable income**. Net wages and salaries account for roughly 45% of the disposable income. The correlation between annual rates of change in private consumption and real disposable income is almost 0.9. [↘ CHART 65 RIGHT](#) By comparison, there is a correlation of 0.4 between both private consumption and total net wages and private consumption and net wages, per capita. Given a constant savings rate, a 1% increase in disposable income results in a 1% increase in private consumption.
465. Total net wages and salaries had a **significant negative impact** on disposable income and private consumption in the period from 2002 to 2006. Total net wages made an average growth contribution of -0.4 percentage points to the development of real disposable income in this period. However, this development has reversed since 2007, enabling total net wages to make a significant positive growth contribution to real disposable income of 0.7 percentage points.

3. Fiscal policy effects

466. In discussions on the persisting German current account surplus, Germany has been asked to implement fiscal policy instruments, among other measures, to promote domestic demand. The focus is on **public investment** in particular, as the German development has been below the European average for many years (European Commission, 2014). The quantitative effects of an increase in public investment on the current account, however, have hardly been investigated in the literature. Moreover, the results of a few recent studies based on estimated quantitative models for Germany have yielded significantly diverging results. This is particularly the case for anticipated short-term effects.
467. A study by the **International Monetary Fund** (2014) examined a scenario in which Germany increased the rate of public investment in 2014 and 2015, each by 0.5 percentage points, and undertook measures to increase private investment by a further percentage point in this time period. If structural reforms were implemented simultaneously in all euro area member states, this would result in an accumulation of an additional 2% to 6% in growth impetus for Germany and other major economies. The German current account balance would be decreased by one to two percentage points.
468. Simulation-based calculations using the **National Institute Global Econometric Model NiGEM** (BMF, 2013) show that an increase in public investment in the amount of 1% of GDP would likely result in a short-term decline in

the German current account balance in relation to GDP by around 0.8 percentage points. In this model, no effects were observed on the current account in the medium to long term.

469. This contrasts to the estimated short-term negative effect on the current account, which, based on an extended version of the New-Keynesian model Quest III of the European Commission was found to be considerably weaker, as the formation of public capital stock was advantageous for potential output and competitiveness (Kollmann et al., 2015). In this study, the current account balance in relation to GDP declines in the short term by a maximum of 0.2 percentage points and actually rises again in the medium to long term. Thus, according to this study, public investment is not a suitable means of sustainably decreasing a current account surplus.
470. An increase in public final consumption expenditure would, on the other hand, lower the current account balance, according to a number of recent studies, although the extent of these effects is moderate. [↘ TABLE 18](#) The analyses are based on multiple-country studies conducted with time series methods (vector autoregressive models) and/or panel estimates. In sum, the studies cited show that an increase in public consumption expenditure by 1% of GDP could reduce the current account balance in relation to GDP by between 0 and 0.5 percentage points. At 0.8 percentage points in the short term, the study conducted by Beetsma et al. (2008) provides the greatest effect, and represents an exception. This high figure can be explained by the – in contrast to other studies– very high government expenditure multiplier used, which is significantly higher than 1 and resulted in a strong rise in imports.

[↘ TABLE 18](#)

Consequences of an increase in public final consumption expenditure and the government deficit

Study	Method	Shock (1 % from Gross domestic product)	Deterioration in the current account/trade balance in percent of GDP (in percentage points)
Mohammadi (2004)	Panel regression (industrial countries)	Public consumption	0 – 0.26 (tax financed) 0.22 – 0.5 (debt financed)
Corsetti and Müller (2006)	VAR	Public consumption	0 (Australia and United States), 0 – 1 (Canada), 0.5 – 0.8 (United Kingdom)
Beetsma et al. (2008)	Panel VAR (EU countries)	Public consumption	0.5 – 0.8
Abbas et al. (2011)	Panel VAR (industrial, emerging and developing countries)	Public consumption	0.45 – 0.54
Chinn and Prasad (2003)	Panel regression (industrial countries)	Government deficit	0.34
Abiad et al. (2009)	Panel regression (Europe)	Government deficit	0
Abbas et al. (2011)	Panel regression (industrial countries)	Government deficit	0.11

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471. There are also a number of empirical studies which analyse the impacts of a general change in **government deficit**, but without differentiating between the

measures –revenue or expenditure-based – that changed the deficit in each case. [↘ TABLE 18](#) Overall, the results demonstrate that an increase in government deficit moderately lowers the current account balance. Due to higher multipliers of expenditure-based measures, it can be assumed that revenue-based instruments will have even lesser effects on the current account. There are no reliable studies available on revenue-based instruments for Germany or Europe. It should be noted, however, that in most studies do not control for monetary policy. It can thus be assumed that the fiscal effects on the current account in the present situation of **near-zero interest rates** would tend to be higher.

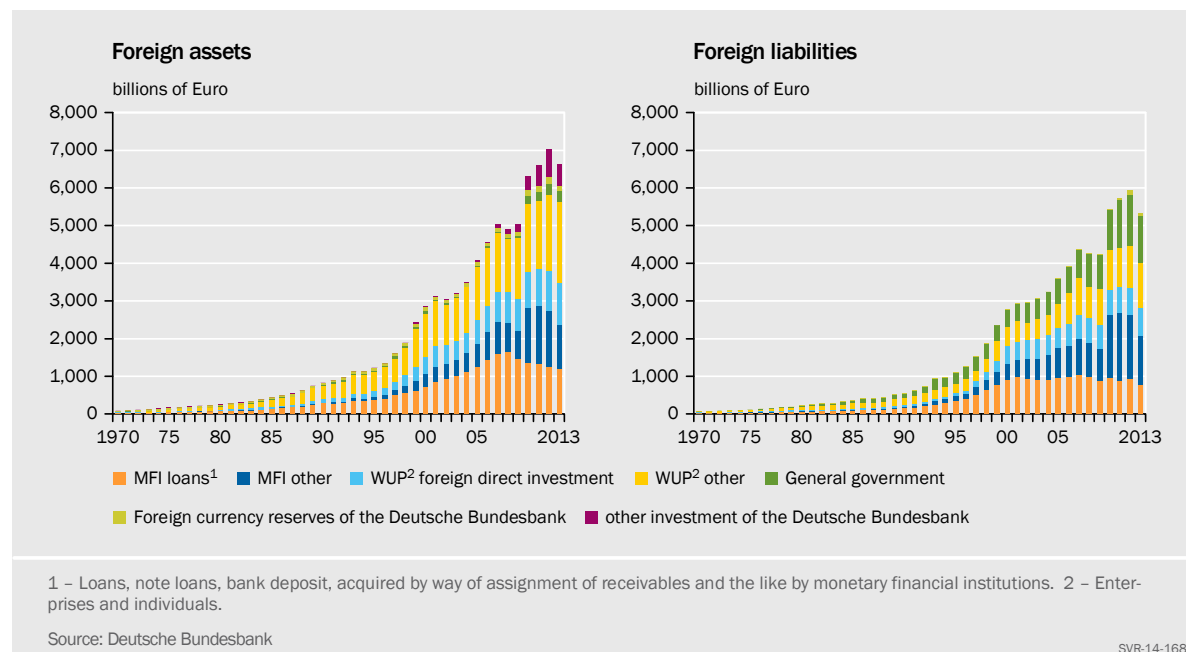
IV. DEVELOPMENT OF FOREIGN ASSETS

472. As a result of the persisting current account surplus **German net foreign assets** have increased by €1.3 trillion since 2000. Assets increased by €3.8 trillion and liabilities by €2.6 trillion. [↘ CHART 66 LEFT](#) The German economy had total foreign assets of more than €6.6 trillion, or 245% of nominal GDP at the end of 2013. Throughout this period, the increase was primarily driven by the increasing assets of private banks, insurance companies, non-financial corporations and private individuals.

There has, however, been a major change in the ownership structure of these foreign assets over the past few years. While the Bundesbank and general government held only around 4% of total foreign assets up to the year 2007, their share has since then increased dramatically and reached 17%, or €1.2 trillion, in 2012. At the same time, banks' foreign assets from financial transactions de-

[↘ CHART 66](#)

Germany's international investment position



creased considerably. Their share fell from 32% in 2007 to 18% in 2013.

473. The major increase in foreign assets held by the Bundesbank and general governments is a **consequence of the rescue measures** introduced in response to the euro crisis. After the disintegration of the European interbank market and loss of trust in the solvency of some euro area countries, the crisis was alleviated with monetary policy measures of the ECB and government rescue packages. These measures also had the effect of partially substituting cross-border flows of private capital with government loans and the ECB's refinancing system.

The Bundesbank's current **TARGET2 balance** of €480 billion in September 2014 is the result of the monetary policy stabilisation measures. The bank is unable to control this balance itself. Indeed, the Bundesbank had major reservations about some of the measures taken, for example the downgrading of standards for eligible collateral used in the ECB's refinancing transactions. The Bundesbank does not receive any explicit compensation for its TARGET2 balance. The German government also took additional risks as a result of the rescue packages, for example the bilateral financial assistance to Greece.

474. Exports of public capital prevented a **sudden stop** of private capital flows within the euro area and ensured that the currency area did not fall apart. [↘ AER 2012 BOX 7](#); [↘ AER 2011 ITEM 135 ET SEQ. AND BOX 7](#). At the same time, however, a sudden correction of the current account balances within the euro area member states was avoided. The last few years have given rise to a certain **inconsistency in European economic policy** with regard to the German current account surplus (Sinn, 2012). On the one hand, the strategy has relied on the willingness of German economic policy to keep capital flowing within the currency union by exporting public capital. However, on the other hand, there have been calls for Germany to reduce its current account surplus, which has itself been partly funded by these rescue measures.

Are German foreign assets a “bad investment”?

475. In the course of the global financial and euro-area crises, increasing doubts have recently been expressed about the profitability of German foreign assets (Klär et al., 2013; Baldi and Bremer, 2013). Statistics indeed show that net foreign assets have grown **considerably more slowly** since 2007 than the sum of the corresponding current account surpluses. [↘ CHART 67 LEFT](#) The discrepancy is even greater if one measures the difference between the increase in net foreign assets and the cumulative financial account balance. Using this method, the figure adds up to roughly €575 billion since the beginning of 2007. However, the discrepancy between the cumulative current account balance and net foreign assets is not well suited to draw conclusions concerning the fall in the value of German foreign investments.
476. Only with uniform data would the difference between the balance of payment and asset statistics indicate valuation-related adjustments resulting from market price and exchange rate effects. However, this is not the case. The flows within the current and financial accounts and stocks in the international investment

position (IIP) are based on different primary statistics (Deutsche Bundesbank, 2014b, Frey et al., 2014). Calculations by the Bundesbank show that more than 60% of the discrepancy is explained by **statistical factors** in the recording of various transactions: in particular, the inclusion of financial derivatives and the recording of the equity capital of direct investments. ↘ CHART 67 RIGHT

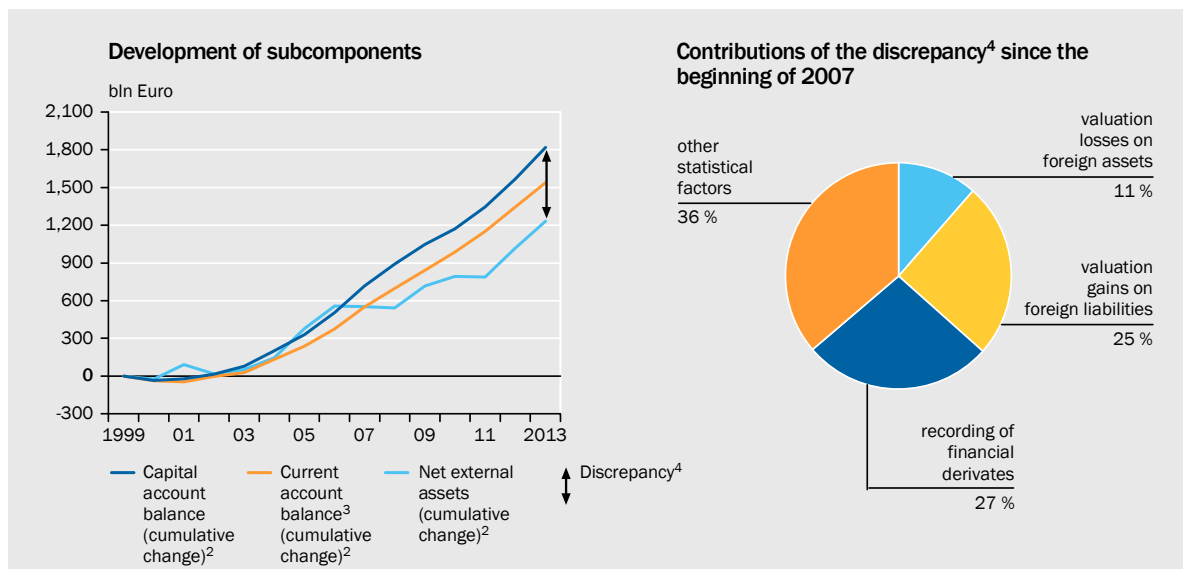
- 477. The remaining discrepancy is largely due to the depreciation of the euro in 2013 and the **increasing prices** of bonds from German issuers that are held by foreigners. The latter phenomenon is largely attributable to the effects of the euro crisis and has caused an increase in foreign liabilities. By comparison, valuation losses on foreign assets account for a relatively small part of the discrepancy. The Bundesbank puts the value losses due to write-downs and asset disposals at banks at just €37.5 billion since the start of the financial crisis. Overall, less than 10% of the total discrepancy is attributable to value losses.

- 478. The Bundesbank also reports both the **return on investment income** and the **total return** on German foreign assets and liabilities. The calculations show that German investment income (primarily interest and dividends) on German foreign assets exceeded that on foreign-held investments in Germany throughout the last decade. The relevant investment income returns in 2013 stood at 2.8% for German foreign assets and 2.1% for German foreign liabilities. This result is unchanged with the inclusion of market price and exchange rate-related changes and valuation allowances made in respect of write-downs (total return). It is evident that the returns on German foreign direct investment are much higher than on non-residents' direct investments in Germany.

- 479. The change in Germany's net foreign position cannot be used in isolation to evaluate the profitability of German foreign investments. More detailed calculations show that German savings are, in fact, generally being **profitably invest-**

↘ CHART 67

Indicators of the current account balance¹



1 – Status: May 2014. 2 – Start 1999Q1. 3 – Including capital transfers. 4 – Discrepancy between capital account balance and net external assets.

Source: Deutsche Bundesbank

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ed abroad. In any case, it cannot be directly concluded on the basis of these figures that domestic investment would, ex ante, have been better than foreign investment, as it is sometimes claimed (DIW, 2013). However, the figures do raise the question as to why, in the past, the expected returns were lower in Germany than abroad and to what extent structural factors are responsible for this.

V. CONCLUSIONS AND OUTLOOK

480. In March 2014, the **European Commission** identified a macroeconomic imbalance in Germany during its “Macroeconomic Imbalances Procedure,” due to the high German current account surplus. The Commission offers a number of descriptive and quantitative analyses as the basis for its argument. Its diagnosis attributes the increase “primarily” to a lack of domestic demand (European Commission, 2014). It therefore calls for a major increase in public investment and measures to increase potential growth.

481. **The German Council of Economic Experts does not concur with this diagnosis.** The high current account surplus is primarily the result of the consolidation of the private sector, which can be seen as a reaction to the debt-financed domestic growth in the years following reunification. The strong appreciation of the D-Mark before the introduction of the euro also required companies to improve their price competitiveness. In addition, the corporate tax reform of 2001 reduced the previous distortions and created incentives that increased the relative attractiveness of foreign investments for German companies. This supported the general trend towards increased creation of production capacities abroad, which in turn increased net earned and investment income. This was accompanied by consolidation of the fiscal budget.

The last three years of the euro area crisis were also accompanied by a whole range of **special factors** that had an impact on the current account balance. For example, the nominal effective euro exchange rate fell considerably as the crisis worsened. After temporarily appreciating in value, the currency began to fall again following the announcement of further monetary easing by the ECB.

482. The many common fiscal rescue measures of euro area member states, together with the ECB's unconventional monetary policy measures, also enabled a continual reduction in the current account deficits of the affected member states. Potential sudden corrections of current account balances which would be possible only in a system with flexible exchange rates did not take place. The willingness of German economic policy to export public capital, and thereby maintain flows of capital within the currency union, allowed the deficit countries to reduce their current account deficits vis-à-vis other member states much more gradually than would otherwise have been the case. This means that the call for the German government to assist certain countries with rescue programmes is somewhat contradicted by the **demand for a reduction** of the German current account surplus, which was funded by the rescue packages.

483. Given this assessment, the German Council of Economic Experts **does not agree with all economic policy recommendations of the European Commission**. We regard the €15 to 30 billion figure that the European Commission puts on the public investment backlog as an overestimate. The further capital investment requirement, primarily in civil engineering, is more likely to be in the order of the low single-digit billions. [↘ AER 2013 ITEM 551](#) These measures will have no more than a modest influence on the German current account balance, despite low interest rates at present. The view that a liberalisation of the service sector could contribute to reducing the current account surplus also seems very vague.
484. However, the German Council of Economic Experts does share the Commission's view that measures should be taken to increase **the growth in potential output**. We hold this view irrespective of whether the measures are capable of reducing the current account surplus. With regard to the current account balance, an improvement in international growth prospects is likely, via various channels, to cause more German savings to remain for investment within the domestic economy and foreign capital to be attracted (Engel and Rogers, 2005). A growth in immigration of skilled foreign workers could contribute to this, as could reforms that aim to increase labour force participation. [↘ AER 2010 ITEM 216 F](#).
485. Whether the current account surplus decreases in the short to medium-term depends largely on five factors that have had a positive impact on the current account balance in the past.
- Firstly, there is the question of how long the consolidation process of private households will continue. There are currently signs that it has come to an end. The savings rate has declined since 2005 and the real estate market has revived.
 - The second question is whether German companies will continue their increase in equity ratios. There is currently no sign of a trend reversal.
 - Thirdly, there is a need to discuss the reasons for the relatively moderate investment demand by German companies. This issue requires greater attention and analysis in future.
 - Fourthly, there is the question how the ageing population will impact the current account in the future. The population structure will begin to change dramatically from the 2020s onward. The baby boomers will leave the labour market and far fewer young people will enter it. The assets accumulated abroad are therefore likely to be drawn down by the constantly increasing number of pensioners, which will have a negative impact on the current account balance. It is currently difficult to say with any certainty how powerful this effect will be.
 - Fifthly, the ECB's monetary policy strategy is an important determinant of the development of the German current account in the coming years. A prolonged expansionary monetary policy would make a significant contribution to depreciation of the euro and thus have an expansionary impact on the current account.

A different opinion

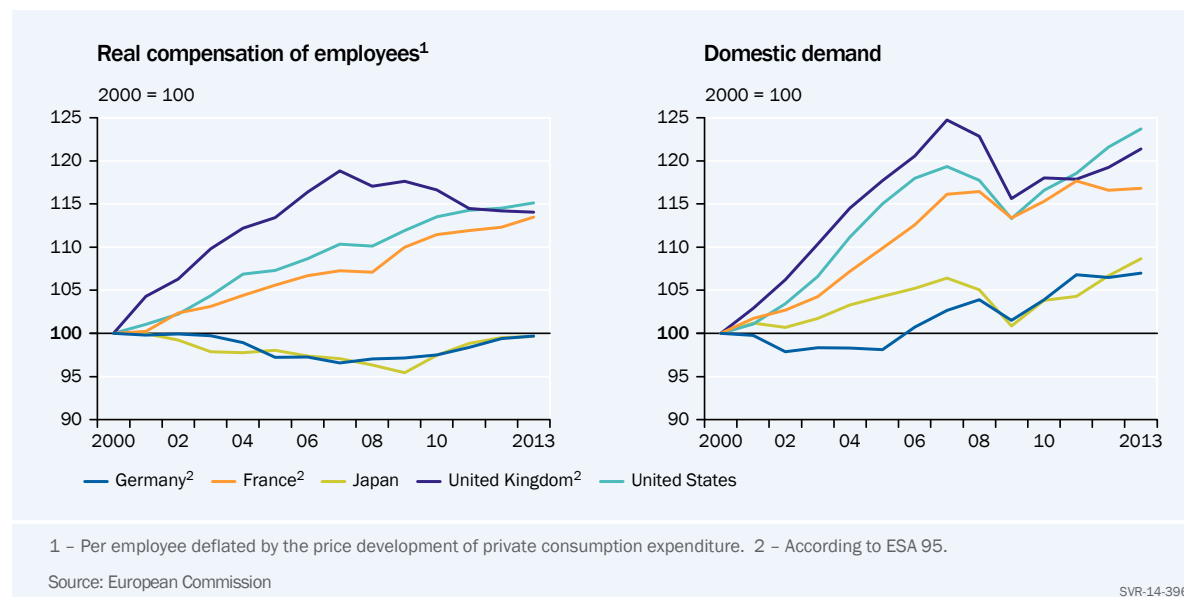
486. One member of the Council, **Peter Bofinger**, holds a different opinion of the German current account surplus analysis undertaken in this chapter.
487. In this chapter, the majority came to the conclusion that the high surplus in the German current account for some years now is not the result of a macroeconomic imbalance, but of weak domestic demand. Consequently, the majority does not see any great need to undertake steps in public investment to help reduce the current account surplus.
488. Overall, a marked weakness in demand has been noted in the German economy since the beginning of the last decade. This is closely related to the “**wage moderation**” undertaken in this period, which promoted German exports, but also resulted in very weak domestic demand development compared to the international level.

In the period from 2000 to 2013, the growth rate of **domestic consumption** of only 0.5% was significantly lower than the growth rate of GDP of 1.0%. In contrast, in the period from 1991 to 2000, the GDP growth rate and that of domestic consumption each registered 1.6%. This corresponds with an average rise in unit wage costs of 1.7% in the period 1991 to 2000, and of only an average 0.8% in the years 2000 to 2013.

The marked decline in German domestic demand can also be noted in a **comparison with other major national economies**. ↘ CHART 68 While in Germany and Japan real wages were nearly stagnant and domestic demand developed at only a very subdued pace, a considerable rise in real wages and domestic demand was evident in the US, the UK and France during the same period.

↘ CHART 68

Real wages and domestic demand in major economies



489. This does not contradict the argument that the German current account surplus is due to private sector **consolidation**. ∽ ITEM 423 ET SEQ. In fact, consolidation means nothing other than that German companies did not use their significantly higher profits – not least resulting from wage moderation – for additional investment, thereby spurring demand, but instead to reduce their debt. Contrary to wage moderation advocates' expectations (AER 2003 item 648), there is no guarantee at all that additional profit is regularly transformed by the capital markets into private or government demand.
490. It is no surprise that this development can be judged differently from a German point of view than a European one. The advantages of this strategy have outweighed the disadvantages on balance, as the negative effects on domestic demand were overcompensated by the sharp rise in exports. From the point of view of other countries, wage moderation and the current account surplus it has generated mean, however, a **deficit in aggregate demand**. At the same time, this results in a decrease in price competitiveness – which then requires wage moderation in those countries too. ∽ ITEM 140 ET SEQ. This overarching aspect, which is key to the European Commission's perspective, is ignored in the majority of analyses.
491. A very high current account surplus of a comparatively large national economy, which has actually been rising further in the past few quarters, is particularly problematic in a European and global environment, parts of which continue to be characterised by high negative output gaps. The **euro area's current account surplus that has increased** considerably in recent years shows, not least, the fact that the euro area adjustment necessary in the second half of the last decade due to the high current account imbalances occurred in an increasingly asymmetrical fashion. ∽ CHART 48, PAGE 219 This **asymmetry** is an important cause of the deflationary trends in the euro area.
492. Consequently, in view of a **risk of deflation for the euro area**, which the International Monetary Fund estimates at around 30% (IMF, 2014), the appeals by the European Commission and other international institutions to German economic policymakers are indeed justified. The economic development of the euro area, and also of the German economy, will approach stagnation in the coming quarters. The **European Central Bank (ECB)** has, for the most part, reached the limits of its room for manoeuvre, leaving aside the option of buying government bonds. The resulting pressure on what are already low German bond yields would cause great harm to German public acceptance of the ECB, which is dwindling anyway. As German economic policymakers have comparatively high fiscal flexibility, they should do everything they can to reduce the current account surplus through increased investment in Germany.
493. Lowering Germany's high current account surplus is not only in the interests of German partner countries but also in **Germany's own interests**. The very high German financial surplus and the unusually low ratio of net investment to national savings demonstrate that Germany is increasingly incapable and/or unwilling **to transform savings into material wealth**. ∽ CHART 54 LEFT The amount of net investment is thus not to be viewed in isolation but in the context

of total savings activity. With returns on financial assets that barely exceed the rate of inflation, allocating accumulated national assets, which are largely apportioned to financial assets, is far from ideal. The fact that foreign subsidiaries of Germany companies use a portion of statistically reported financial asset formation for investments has no strong bearing on the above revelation either.

▷ ITEM 426

494. In addition to more heavily promoting **private investment**, in particular via the reintroduction of degressive depreciation, a significant expansion of **public investment** a good option. This is not just about “investment gaps” that are identified in one way or another from the past but much more about the question of what Germany's **potential for future-oriented public spending** is. This question should be determined in the first place by how high government borrowing costs are and what returns can be expected from public spending. This is completely different in an environment of real interest rates close to zero than in one with significantly higher government borrowing costs.

A government investment initiative should not be limited to infrastructural expenses but should generally take into account **public spending that has a positive impact on growth and sustainability** (Thöne, 2004). Besides public investment, this also covers in particular spending in education, and research and development.

The federal government should thus create a “**future think tank**” in addition to the commission of experts, to bolster investments in Germany. This think tank should be given the mandate of determining the potential for this broad scope of **high-yielding public investment**. This is the only way to answer the question of what additional investments in Germany would make sense.

495. Empirical studies generally show that **public investment offers high returns**. Average long-term output elasticity of 0.05% to 0.06% was determined for transport infrastructure investments (Mello et al., 2013). An additional 1% investment in transport infrastructure generated additional long-term GDP growth of 0.05% to 0.06%. With a transport infrastructure total of €778 billion in 2011, an additional investment of €7.8 billion with an elasticity of 0.05% would therefore have yielded additional GDP of €1.35 billion. In other words, one billion in additional investment raises GDP by €173 million. Assuming a useful life of 30 years and straight-line depreciation of the effect on GDP, this results in a return of around 12%.

Very high returns can also be expected for government **investment in education**. Given attainment of upper secondary level education, the return rate for men is 9.4% and for women 10.9% (Buschle, 2013). The returns are particularly high if funds are used for early childhood education.

496. If German economic policymakers do not use this potential, it is not only disadvantageous to macroeconomic development in Germany and the euro area, but it also has negative medium and long-term effects on German prosperity.

The main argument against deficit spending is the **debt brake**. In applying this argument, however, it should be borne in mind that the ban it contains on deficit spending has **no economic basis**. In its expertise “Effectively Limiting Public Debt” published in 2007 (AER 2007 Item 2), the German Council of Economic Experts determined the following:

(...) demanding a general ban on public debt (...) would make as little economic sense as prohibiting private individuals or companies from borrowing.

Permanent public debt could, to a certain degree under intergenerational distribution aspects, be justified, namely in connection with public investment that increases the wealth of future generations or, via its productivity effects, bequeaths them future earnings, thus making them “wealthier”. The intergenerational distribution effect of government debt in this case is a desirable result, in order to also have the future beneficiaries of today's spending share in the financing costs. This is the intention behind the “golden rule of fiscal policy” that permits deficit spending.

In line with this argumentation, the German Council of Economic Experts advocated at that time structuring the debt brake to enable **net investment to be financed through borrowing**.

497. As a reform of the debt brake is highly unlikely at the present time, use should at least be made of the **flexibility for government borrowing** inherent in this policy. The debt brake permits the federal government structural new borrowing of 0.35% of GDP annually, which is the equivalent of €10 billion. As no purpose is prescribed for this new debt, it could thus be used to finance additional expenditure for research and development, education and depreciation relief for private investments.

498. The unusually low yields on long-term bonds should however be a reason to thoroughly reconsider the debt brake again. **Low interest rates** only partially reflect the ECB's very expansionary monetary policy. It is due much more to a generally very marked **caution on the part of private borrowers**. This is notable in lending volumes of German banks, which despite such a low rate of interest are currently rising only slightly. For example, the rate of increase in mortgage loans in the 2nd quarter of 2014 stood at 2.0%.

“**Breaking even**” means that, as the largest potential borrower, the government assumes no more net debt. This makes the problem of a lack of borrowers prepared to take on long-term debt even worse. The consequences of a continued phase of low interest-rates for life insurance and private pension plans would be dire.

499. We do not share the opinion of the majority that the appeal of other member states to the German government to reduce the current account surplus contradicts to a certain extent the call to assist problem countries with rescue packages ▽ ITEM 473 ET SEQ. The rescue packages served primarily to ensure financing of **outstanding debt**. A lower German current account surplus through higher German imports would have meant additional current income for problem coun-

tries, which would have enabled them to finance the current expenses for their imports by borrowing less **additional funds**. Viewed in this manner, there is no contradiction at all between the rescue packages and a reduced current account surplus by means of higher German absorption.

References for the different opinion

Buschle, N. and C. Haider, (2013), Über den ökonomischen Nutzen der Bildung – Ansätze zur Berechnung von Bildungsrenditen, *Wirtschaft und Statistik* 11/2013, 805-817.

IMF (2014), *World economic outlook October 2014 – Legacies, clouds, uncertainties*, International Monetary Fund, Washington, DC.

Melo, P., D. Graham and R. Brage-Ardao (2013), The productivity of transport infrastructure investment: A meta-analysis of empirical evidence, *Regional Science and Urban Economics* 43, 695-706.

Thöne, M. (2004), Wachstums- und nachhaltigkeitswirksame öffentliche Ausgaben („WNA“), *Monatsbericht des Bundesministeriums der Finanzen* März 2013, 73-79.

REFERENCES IN CHAPTER 6

Abbas, S.M.A., J. Bouhga-Hagbe, A. Fatás, P. Mauro and R.C. Velloso (2011), Fiscal policy and the current account, *IMF Economic Review* 59, 603-629.

Abiad, A., D. Leigh and A. Mody (2009), Financial integration, capital mobility, and income convergence, *Economic Policy* 24, 241-305.

Adam, K., P. Kuang and A. Marcet (2011), House price booms and the current account, in: Acemoglu, D. and M. Woodford (Ed.): *NBER Macroeconomics Annual 2011*, Volume 26, University of Chicago Press, Chicago, 77-122.

Aichele, R., G. Felbermayr and I. Heiland (2013), Neues von der Basarökonomie, *ifo Schnelldienst* 66, 17-28.

Arndt, C., C.M. Buch and M.E. Schnitzer (2010), FDI and domestic investment: An industry-level view, *The B.E. Journal of Economic Analysis & Policy* 10, 1-22.

Baldi, G. and B. Bremer (2013), Verluste auf das deutsche Nettoauslandsvermögen – Wie sind sie entstanden?, *DIW Wochenbericht* 49/2013, 32-40.

Beetsma, R., M. Giuliodori and F. Klaassen (2008), The effects of public spending shocks on trade balances and budget deficits in the European Union, *Journal of the European Economic Association* 6, 414-423.

Bernanke, B.S. (2005), *The global saving glut and the U.S. current account deficit*, Rede, Homer Jones Lecture, St. Louis, 14. April 2005.

BMF (2013), Gesamtwirtschaftliche Auswirkungen fiskalpolitischer Impulse, *Monatsbericht* November 2013, 15-22, Federal Ministry of Finance.

BMWi (2013a), Investitionsschwäche in Deutschland?, *Monatsbericht* Dezember 2013, 11-18, Federal Ministry for Economic Affairs and Technology.

BMWi (2013b), Die Wirkung wirtschaftspolitischer Unsicherheit auf das Investitionsverhalten in Deutschland, *Monatsbericht* August 2013, 11–16, Federal Ministry for Economic Affairs and Technology.

Breuer, S. and J. Klose (2014), Who gains from nominal devaluation? An empirical assessment of Euro Area exports and imports, *The World Economy*, forthcoming.

Buch, C.M., J. Kleinert, A. Lipponer and F. Toubal (2005), Determinants and effects of foreign direct investment: Evidence from German firm-level data, *Economic Policy* 20, 52-110.

Chinn, M.D. and H. Ito (2006), What matters for financial development? Capital controls, institutions, and interactions, *Journal of Development Economics* 81, 163-192.

Chinn, M.D. and E.S. Prasad (2003), Medium-term determinants of current accounts in industrial and developing countries: An empirical exploration, *Journal of International Economics* 59, 47-76.

- Coenen, G., P. McAdam and R. Straub (2008), Tax reform and labour-market performance in the Euro Area: A simulation-based analysis using the New Area-Wide Model, *Journal of Economic Dynamics and Control* 32, 2543-2583.
- Coenen, G. and R. Straub (2005), Does government spending crowd in private consumption? Theory and empirical evidence for the Euro Area, *International Finance* 8, 435-470.
- Cogan, J.F., T. Cwik, J.B. Taylor and V. Wieland (2010), New Keynesian versus old Keynesian government spending multipliers, *Journal of Economic Dynamics and Control* 34, 281-295.
- Corsetti, G. and G.J. Müller (2006), Twin deficits: Squaring theory, evidence and common sense, *Economic Policy* 21, 597-638.
- Danninger, S. and F. Joutz (2008), What explains Germany's rebounding export market share?, *CESifo Economic Studies* 54, 681-714.
- Desai, M.A., C.F. Foley and J.R. Hines Jr. (2005), Foreign direct investment and the domestic capital stock, *American Economic Review* 95, 33-38.
- Deutsche Bundesbank (2013), Ertragslage und Finanzierungsverhältnisse deutscher Unternehmen im Jahr 2012, *Monatsbericht* Dezember 2013, 43-58.
- Deutsche Bundesbank (2014a), Die deutsche Zahlungsbilanz für das Jahr 2013, *Monatsbericht* März 2014, 37-53.
- Deutsche Bundesbank (2014b), Diskrepanz zwischen der Veränderung des Auslandsvermögens und des kumulierten Saldos der Kapitalbilanz: Kein geeigneter Indikator für Vermögensverluste, *Monatsbericht* Mai 2014, 52-54.
- DIHK (2014), *Dynamik im Inland überlagert Störfaktoren – Ergebnisse der DIHK-Konjunkturumfrage bei den Industrie- und Handelskammern*, Association of German Chambers of Commerce and Industry, Berlin.
- DIW (2013), Investitionen für mehr Wachstum – Eine Zukunftssagenda für Deutschland, *DIW-Wochenbericht* 26/2013, Deutsches Institut für Wirtschaftsforschung, Berlin.
- DIW (2014), Wirtschaftliche Impulse für Europa, *DIW-Wochenbericht* 27/2014, Deutsches Institut für Wirtschaftsforschung, Berlin.
- Dustmann, C., B. Fitzenberger, U. Schönberg and A. Spitz-Oener (2014), From sick man of Europe to economic superstar: Germany's resurgent economy, *Journal of Economic Perspectives* 28, 167-188.
- Enders, Z., P. Jung and G.J. Müller (2013), Has the Euro changed the business cycle?, *European Economic Review* 59, 189-211.
- Engel, C. and J.H. Rogers (2006), The U.S. current account deficit and the expected share of world output, *Journal of Monetary Economics* 53, 1063-1093.
- European Commission (2014), *Macroeconomic imbalances – Germany 2014*, European Economy – Occasional Paper 174, Directorate-General Economic and Financial Affairs, Brussels.
- European Commission (2012), *Scoreboard for the surveillance of macroeconomic imbalances*, Occasional Paper 66, Directorate-General Economic and Financial Affairs, Brussels.
- Fair, R.C. and K.M. Dominguez (1991), Effects of the changing U.S. age distribution on macroeconomic equations, *American Economic Review* 81, 1276-1294.
- Felbermayr, G.J., M. Larch and W. Lechthaler (2013), Unemployment in an interdependent world, *American Economic Journal: Economic Policy* 5, 262-301.
- Feld, L.P. and J.H. Heckemeyer (2011), FDI and taxation: A meta-study, *Journal of Economic Surveys* 25, 233-272.
- Frey, R., U. Grosch and A. Lipponer (2014), Fallstricke bei der Bestimmung von Vermögensverlusten deutscher Anleger im Ausland, *Wirtschaftsdienst* 94, forthcoming.
- Friedman, M. (1957), *A theory of the consumption function*, Princeton University Press, Princeton.
- Gadatsch, N., N. Stähler and B. Weigert (2014), *German labor market and fiscal reforms 1999 to 2008: Can they be blamed for intra-Euro Area imbalances?*, Working Paper 05/2014, German Council of Economic Affairs, Wiesbaden.
- Gete, P. (2010), *Housing markets and current account dynamics*, Arbeitspapier, Georgetown University, Washington, DC.

- Gros, D. and M. Busse (2013), *The macroeconomic imbalance procedure and Germany: When is a current account surplus an 'imbalance'?*, CEPS Policy Brief No. 301, Brussels.
- Higgins, M. (1998), Demography, national savings, and international capital flows, *International Economic Review* 39, 343-69.
- Homburg, S. (2010), *Allgemeine Steuerlehre*, 6th edition, Vahlen, Munich.
- Homburg, S. (2005), Internationale Kapitaleinkommensbesteuerung nach dem Wohnsitzprinzip oder dem Quellenprinzip, in: Endres, D., A. Oestreicher, W. Scheffler, U. Schreiber und C. Spengel (Ed.): *Die internationale Unternehmensbesteuerung im Wandel*, Beck, Munich, 14-27.
- Homburg, S. (2000), Perspektiven der internationalen Unternehmensbesteuerung, in: Andel, N. (Ed.): *Probleme der Besteuerung*, Duncker & Humblot, Berlin, 9-61.
- Horioka, C.Y. and A. Terada-Hagiwara (2013), *Corporate cash holding in Asia*, NBER Working Paper 19688, Cambridge.
- Iacoviello, M. (2005), House prices, borrowing constraints, and monetary policy in the business cycle, *American Economic Review* 95, 739-764.
- Iacoviello, M. (2011), Housing wealth and consumption, in: Smith, S. (Hrsg.): *International encyclopedia of housing and home*, Elsevier, Amsterdam, 673-678.
- IMF (2005), *France, Germany, Italy, and Spain: Explaining differences in external sector performance among large Euro Area countries*, IMF Country Report No. 05/401, International Monetary Fund, Washington, DC.
- IMF (2014), *Euro Area policies: 2014 Article IV consultation*, IMF Country Report No. 14/199, International Monetary Fund, Washington, DC.
- Klär, E., F. Lindner and K. Sehovic (2013), Investition in die Zukunft? Zur Entwicklung des deutschen Auslandsvermögens, *Wirtschaftsdienst* 93, 189-197.
- Kollmann, R., M. Ratto, W. Roeger, J. in 't Veld and L. Vogel (2015), What drives the German current account? And how does it affect other EU member states?, *Economic Policy* 81, forthcoming.
- mea (2008), *Das Sparverhalten der deutschen Haushalte – Wie viel, warum und wie spart man in Deutschland*, Policy Brief No. 5, Mannheim Research Institute for the Economics of Aging, Universität Mannheim.
- Mohammadi, H. (2004), Budget deficits and the current account balance: New evidence from panel data, *Journal of Economics and Finance* 28, 39-45.
- Müller, G. (2015), Comment on: What drives the German current account? And how does it affect other EU member states?, *Economic Policy* 81, forthcoming.
- Punzi, M.T. (2013), Housing market and current account imbalances in the international economy, *Review of International Economics* 21, 601-613.
- Ratto, M., W. Roeger and J. in 't Veld (2009), QUEST III: An estimated open-economy DSGE model of the Euro Area with fiscal and monetary policy, *Economic Modelling* 26, 222-233.
- Schunk, D. (2009), What determines household saving behavior? An examination of saving motives and saving decisions, *Jahrbücher für Nationalökonomie und Statistik* 229, 467-491.
- Sinn, H.-W. (2005), *Die Basar-Ökonomie. Deutschland: Exportweltmeister oder Schlusslicht?*, Econ-Verlag, Berlin.
- Sinn, H.-W. (2012), *Die Target-Falle: Gefahren für unser Geld und unsere Kinder*, Carl Hanser Verlag, Munich.
- Stephan, S. (2005), *Modellierung von Mengen und Preisen im deutschen Außenhandel*, Dissertation am Fachbereich Wirtschaftswissenschaft der Freien Universität Berlin.
- Thorbecke, W. and A. Kato (2012), *The effect of exchange rate changes on Germany's exports*, RIETI Discussion Paper 12-E-081, Tokio.
- U.S. Treasury (2013), *Report to congress on international economic and exchange rate policies*, Washington, DC, October 30.
- Weichselberger, A. (2014), Deutsche Industrie: Erhöhte Investitionsbereitschaft, *ifo Schnelldienst* 67, 45-49.
- von Weizsäcker, C.C. (2011), *Public debt requirements in a regime of price stability*, Preprints of the Max Planck Institute for Research on Collective Goods 2011/20, Bonn.