

■ German balance of payments in 2021

In 2021, the German economy's current account surplus increased by ½ percentage point to 7½% of nominal gross domestic product (GDP). The surplus more or less returned to its pre-pandemic level, following its short-lived decline in the previous year. It was chiefly the primary income surplus that grew in size, while the balances of the goods account, services account and secondary income remained largely unchanged. This outcome is only partly attributable to the reversal of developments observed in the first year of the pandemic. The primary income surplus recovered owing to a higher level of income from Germany's outward foreign direct investment amid the upswing in most host countries, and German exporters benefited from a rebound in foreign demand. However, strong increases in import prices in connection with pandemic-related supply bottlenecks reduced the surplus in the goods account. In addition, Germans' continued low spending on travel together with exceptionally high receipts from patents for vaccines in 2021 had a positive impact on Germany's services account, which usually runs a deficit.

From a saving and investment perspective, the rise in the current account surplus was attributable mainly to increased saving, which exceeded the cyclical recovery in investment. Saving by non-financial corporations went up, which may, to some extent, have been for precautionary and deleveraging purposes after the crisis-related strains of the year before. While household saving was down, it remained significantly above its pre-crisis level. Given the presence of temporary, persistently large crisis-related burdens, the general government deficit remained broadly unchanged.

The ongoing coronavirus pandemic affected not only the current account but also international capital flows in 2021. In particular, expansionary fiscal and monetary policy responses to the pandemic in many countries affected cross-border activities. At the same time, inflation rates and expectations rose in many places over the course of the year. As a result, a number of major central banks returned to a slightly more restrictive monetary policy. For example, the US Fed began tapering its net asset purchases in November and the Bank of England raised its Bank Rate. Other central banks such as the European Central Bank (ECB), the Bank of Canada and the Bank of Japan announced that they were considering either scaling back or fully discontinuing their asset purchase programmes. All in all, at €314½ billion in 2021, Germany's net capital exports were substantially higher than in the year before (€216½ billion).

Portfolio investment, financial derivatives and direct investment saw net capital exports. By contrast, other investment predominantly gave rise to capital inflows, with the Bundesbank's external claims from a higher TARGET2 balance rising less strongly than its external liabilities. Besides larger deposits from non-resident counterparties and the above average issuance of euro banknotes, a one-off effect stemming from the allocation of special drawing rights by the International Monetary Fund (IMF) had an impact here. In turn, the allocation of special drawing rights caused the Bundesbank's reserve assets to grow.

■ Current account

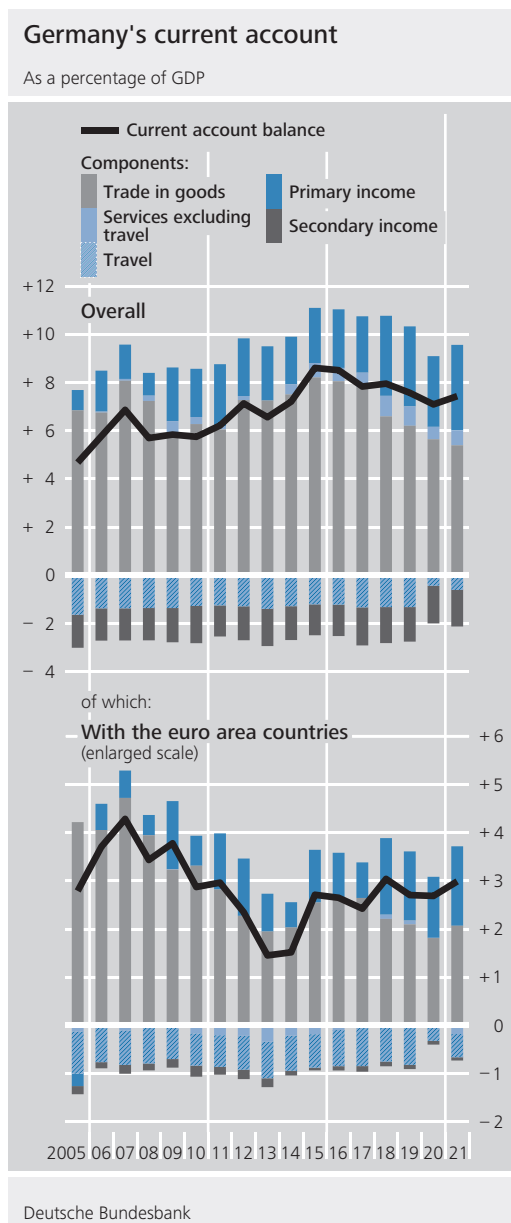
Underlying trends in the current account

Current account surplus up significantly on annual average

In a year-on-year comparison, Germany's current account surplus rose by €26½ billion in 2021 to €265½ billion. The balance increased by ½ percentage point to 7½% of nominal GDP. However, Germany's current account surplus shrank over the course of the year. The country's current account surplus amounted to 8¼% of GDP in the first quarter, decreasing as the year progressed to a seasonally adjusted 5½% in the final quarter.

The change in the current account balance was brought about by contrasting developments in certain sub-accounts. The main driver of growth in the aggregate was the significant rise in the primary income balance, due especially to the higher level of income from Germany's outward foreign direct investment amid the economic recovery in most host countries, the pace of which exceeded that in Germany.¹ The surplus in the goods account went up marginally. Relative to GDP, however, it went down slightly. While the economic recovery of Germany's trading partners raised the surplus in the reporting year by way of volume effects, these effects were outweighed by the impact of strong import price increases in connection with pandemic-related supply bottlenecks. The deterioration in German terms of trade over the course of the year was amplified by the rise in energy prices, in particular. In addition, supply-side production constraints in Germany gradually grew larger. On balance, the surplus in the goods account, and with it the current account surplus, shrank over the course of the year. Furthermore, travel started to normalise somewhat around mid-2021, which tended to reduce the surplus in the services account. On average in 2021, the larger receipts in the services account from charges for the use of intellectual property to develop vaccines offset higher deficits in other sub-items, such as cross-border travel. The deficit in the secondary income account remained broadly unchanged.

Higher primary income main reason for growth; increased import prices curbed surplus over course of year



The global economic recovery shaped the global setting in 2021. First, German exporters benefited from increased foreign demand. According to data from the Centraal Planbureau's

¹ Another reason for the stronger increase in the value on the revenue side is the higher starting level for revenue compared with expenditure, which is the result of Germany's larger outward foreign direct investment stock compared with its inward foreign direct investment stock. The direct investment income figures for 2021 compared with 2020 were estimated on the basis of growth factors of other OECD countries' direct investment income based on information from the OECD International Direct Investment Statistics. Final figures are not available until two years after the reports they are based on have been received and checked – currently, these figures are available for the years up to and including 2018.

Global mixture of favourable demand conditions, shortages and price increases for intermediate goods and energy

(CPB) World Trade Monitor, world trade increased very significantly across regions. Economic output in a number of countries, including the United States and China, returned to or exceeded pre-crisis levels. Other economies, including those in the euro area, were still lagging behind in terms of economic activity due to divergent pandemic developments and measures taken to combat them. Second, the global boost in demand led to delivery delays and shortages of important intermediate goods in light of the pandemic-related production and transport problems. This led to steep increases in the prices of inputs and industrial raw materials. The prices of fossil fuels also rose, in some cases drastically, in view of high demand and scarce supply. At just under US\$71, a barrel of Brent crude oil cost around two-thirds more in 2021 than in the year before. According to the Hamburg Institute of International Economics, natural gas and coal prices have tripled and doubled, respectively.² German exporters also faced slight headwinds stirred up by the appreciation of the euro. The currency's nominal effective exchange rate against the currencies of the euro area's 42 most important trading partners, on average across 2021, was roughly 1¼% higher than the previous year's level.

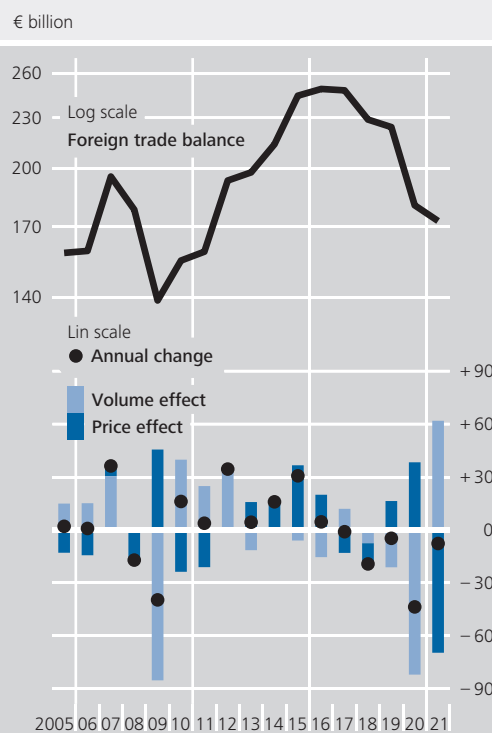
Surplus position vis-à-vis euro area countries increased

From a regional perspective, the current account surplus vis-à-vis euro area countries rose to 3% of GDP, with increases in the balances of the goods account and primary income exceeding the larger deficit in the services account. The current account surplus vis-à-vis non-euro area countries remained unchanged, at 4½% of GDP. Here, increases in the balances of primary income and the services account offset the decrease in the goods surplus.

Significant increases in investment activity and aggregate saving

Aggregate net lending/net borrowing rose slightly relative to GDP in the reporting year.³ Both domestic investment and domestic saving recovered significantly on aggregate, but did not completely rebound from the low levels of the previous year. Amongst other things, supply bottlenecks dampened backlog and catch-

Price and volume effects on the German foreign trade balance*



Source of unadjusted figures: Federal Statistical Office.
 * Decomposed using the Shapley-Siegel index.
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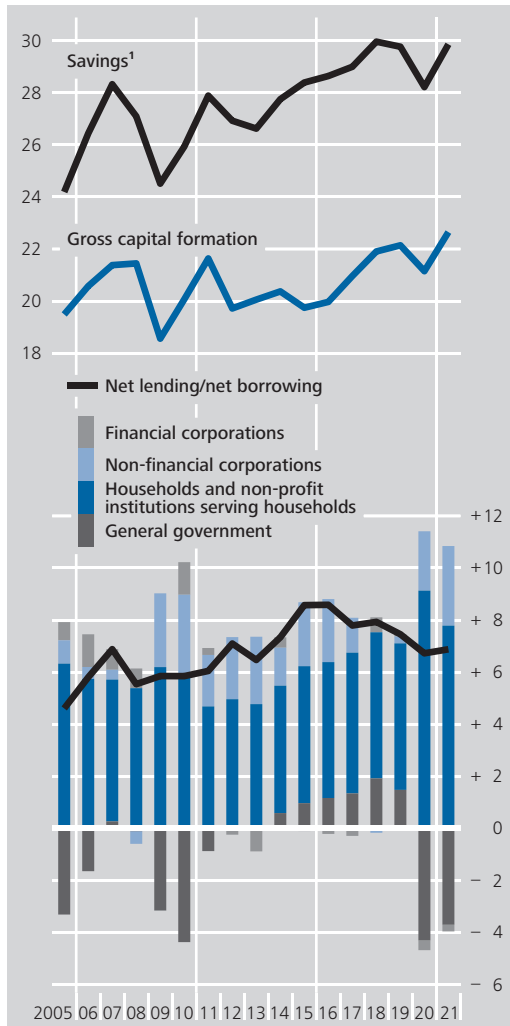
up effects in business investment. Meanwhile, private residential investment increased sharply. While household saving was down, it remained significantly above its pre-crisis level due to certain opportunities to consume, such as trips abroad, being available only to a limited extent or not being taken up to the same extent as before the outbreak of the coronavirus pandemic. Given the presence of temporary, persistently large crisis-related burdens, the general government deficit remained broadly unchanged. However, saving by non-financial corporations increased very significantly, due in part to lower distributions. This may, to some extent, have been for precautionary and deleveraging purposes after the crisis-related strains

² Significant mark-ups were recorded for natural gas and coal compared with 2019, too. Prices went up by only one-tenth for crude oil, suggesting that developments in 2021 also reflect certain signs of recovery.

³ As in previous years, the statements in this report are based on revised balance of payments figures for the past four years. The net lending/net borrowing figures from the national accounts do not yet include these revisions.

Savings and investment in the German economy

As a percentage of GDP



¹ Including consumption of fixed capital.
 Deutsche Bundesbank

of the year before. On balance, the increase in net lending/net borrowing by non-financial corporations exceeded the decrease for households, while net lending/net borrowing by general government remained unchanged.

Goods flows and balance of trade

At 8% in price-adjusted terms, goods exports recorded very strong year-on-year growth in 2021. Imports of goods grew less strongly, by 3¼%. The fact that exports of certain capital goods such as machinery and motor vehicles

Foreign trade saw strong growth on annual average, ...

were significantly depressed in 2020 due to the pandemic was a contributing factor behind the relatively high percentage growth rate for exports. As a result, the volume of total exports in the reporting year was still slightly below the annual average for 2019, a level to which imports returned. In 2021, the year-on-year increase in exports and particularly imports was far higher in terms of value than in price-adjusted terms, at 14% and 17% respectively. On balance, the foreign trade balance fell by €7½ billion to €173 billion.

The recovery of Germany's foreign trade activities from their pandemic-related slump in 2020 slowed down over the course of 2021. The main reason for this was sluggish industrial activity in Germany and its trading partners for large parts of the reporting year; this activity was hampered by delivery delays and materials shortages in the second half of the year, in particular. In real terms, total exports in the fourth quarter were up by only 1½% on the year, and imports were down by 1¾%.

... but affected by supply bottlenecks over course of year

In regional terms, German exporters recorded very strong increases in sales to almost every partner country in the euro area. Deliveries to countries outside the euro area also saw strong growth. In this context, the increases in sales to central and eastern European countries as well as to the United States were especially pronounced. In addition, there was perceptible growth in exports to commodity-exporting countries such as Russia, Brazil and South Africa, which are also likely to have benefited from greater scope for expenditure as a result of income from their commodity sales. Sales to China likewise recorded a significant increase in line with the strong expansion of the Chinese economy. By contrast, exports to the United Kingdom declined markedly as the transitional period ensuring reciprocal market access under EU single market rules had come to an end.

Very strong increase in exports to euro area and sales regions outside the euro area

With regard to the range of exported goods, practically all areas saw very steep growth in price-adjusted terms in the year under review.

Very strong growth in exports of wide range of products

Exports of intermediate goods more than recovered from the decline recorded in the previous year. Among capital goods, there was a considerable increase in exports of motor vehicles and motor vehicle parts as well as of machinery and equipment. Exports of other transport equipment such as aircraft suffered from the global travel outlook, which remains subdued by the coronavirus pandemic, and declined further. Very strong growth was recorded by exports of electrical equipment, chemical products, computers, and electronic and optical products. Exports of consumer goods also made strong gains. This was bolstered by the very sharp hike in demand for pharmaceutical products; in this context, the global need for coronavirus vaccines made in Germany also played a major role.

Strong expansion in imports of wide range of goods, but motor vehicle imports more subdued

Imports of intermediate goods saw very steep growth. Among capital goods, there was an especially sharp rise in deliveries of machinery and equipment from foreign manufacturers. These benefited from an improvement in the pandemic situation leading to a reduction in uncertainty, which had also weighed on the investment plans of German enterprises. Meanwhile, imports of motor vehicles and motor vehicle parts suffered heavily from global supply bottlenecks and saw only moderate growth. Deliveries of consumer goods rose steeply, with imports of pharmaceutical products expanding especially strongly, which was linked to the need for coronavirus vaccines and tests.

Sharp expansion in deliveries from euro area and third countries

Broken down by region, deliveries from the euro area and from other countries saw similarly strong growth in price-adjusted terms, with manufacturers in almost every partner country recording growth in their sales to Germany. Among Germany's major trading partners in the euro area, imports from Belgium grew exceptionally strongly in terms of value, with coronavirus vaccines produced in that country also playing a significant role. Among third countries, key energy suppliers such as Russia and the OPEC countries saw very considerable revenue growth from sales to Germany,

Foreign trade by region

%

Country/ group of countries	Per- cent- age share	Annual percentage change		
		2021	2019	2020
Exports				
Euro area	37.7	0.0	- 10.2	17.4
Other countries	62.3	1.3	- 8.5	12.0
of which:				
United Kingdom	4.8	- 3.6	- 15.3	- 2.6
Central and eastern European EU countries ¹	13.2	2.6	- 6.0	19.0
Switzerland	4.4	4.3	- 0.1	7.7
Russia	1.9	2.6	- 13.0	15.4
United States	8.9	4.7	- 12.8	17.9
Japan	1.3	1.1	- 15.8	4.8
Newly industrial- ised economies in Asia ²	3.0	- 2.4	- 1.5	8.3
China	7.5	3.2	- 0.1	8.1
South and east Asian emerging market economies ³	2.2	- 0.7	- 17.4	15.5
OPEC	1.4	- 2.7	- 13.6	2.2
All countries	100.0	0.8	- 9.1	14.0
Imports				
Euro area	36.5	1.0	- 9.4	18.3
Other countries	63.5	1.7	- 5.6	16.5
of which:				
United Kingdom	2.7	3.7	- 8.8	- 8.4
Central and eastern European EU countries ¹	14.2	2.7	- 4.2	14.1
Switzerland	4.1	- 0.2	- 0.6	7.2
Russia	2.7	- 13.1	- 31.3	53.9
United States	6.0	10.6	- 5.1	6.4
Japan	2.0	0.8	- 10.4	9.5
Newly industrial- ised economies in Asia ²	2.5	- 3.0	- 7.4	11.4
China	11.8	3.8	6.7	20.8
South and east Asian emerging market economies ³	3.9	0.3	- 2.9	15.9
OPEC	0.7	- 4.8	- 48.3	54.0
All countries	100.0	1.4	- 7.0	17.2

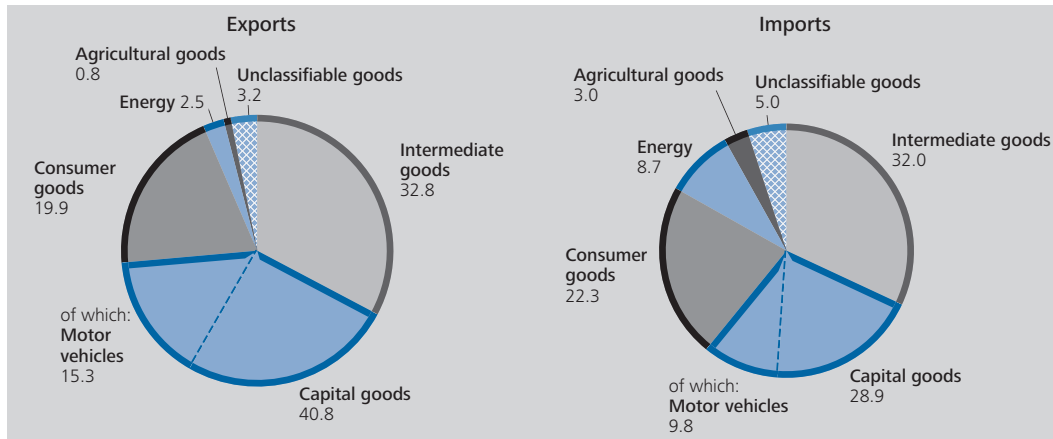
¹ Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania.

² Hong Kong, Singapore, South Korea, Taiwan. ³ India, Indonesia, Malaysia, Philippines, Thailand, Vietnam.

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Foreign trade by selected categories of goods in 2021

Percentage share



Source of unadjusted figures: Federal Statistical Office. May not add up to 100% due to rounding.

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which was partly due to inflation for energy products.

Slight increase in balance of trade in goods despite decline in foreign trade balance

The other components of trade in goods – which comprise the supplementary trade items, net goods exports in merchanting trade and trade in non-monetary gold – more than compensated for the decline in the foreign trade surplus overall. In net terms, the goods surplus rose by €2½ billion in 2021.⁴

Invisible current transactions

Massive rise in services sales; strong impact of one-off developments

In the cross-border trade in services, receipts and expenditure rose steeply in 2021, similarly to the goods trade, following the slump in the previous year. At 17½%, services exports grew to the same extent as services imports, which rose by 18½%. As a result, this account, which had posted large deficits in the past and recorded a slight surplus for the first time in many decades during the course of the pandemic, also posted a small surplus of €½ billion last year. However, this was only partially attributable to the recovery, i.e. a return to pre-pandemic conditions. One-off developments in certain sub-accounts had a major impact on the overall services account.

Before the outbreak of the coronavirus pandemic, German residents' traditionally high foreign travel expenditure was responsible for the large deficit in the services account. With gains of €6½ billion in the year under review, this item saw hardly any recovery following its coronavirus-related collapse of almost three-fifths – or nearly €50 billion – in the first year of the pandemic. Due to the pandemic situation and the associated obstacles to travel, long-distance journeys in particular, but also Alpine winter tourism, were even weaker in 2021 than they had been in the previous year. By contrast, expenditure for summer travel to Mediterranean countries rose again. In terms of travel income – which is dominated by travel for trade fairs, events and business trips – Germany has seen no recovery thus far. The deficit in the travel account, which has been shrinking strongly over the course of the pandemic so

Deficit in foreign travel account still much smaller than usual

⁴ On balance, the higher supplementary trade items were the key factor in this. Here, there was a very sharp rise in the c.i.f. charges for imports, amongst others; these comprise the costs of freight and insurance from the border of the supplier's country to the German border. Furthermore, net income from merchanting trade rose steeply by €6½ billion, as receipts from sales grew to a larger extent than expenditure for purchases. In this context, a key role was played by transactions in the automotive industry; a considerable share of merchanting transactions are generally attributable to this industry. This was contrasted by a rise of €7 billion in net expenditure for trade in non-monetary gold. Here, transaction values rose on the expenditure side and fell on the receipts side.

far, widened again by €7 billion on balance. However, at €22 billion, it remained well short of the considerable deficits to which Germany is accustomed.

Transport services see massive growth in sales with increased deficit

Cross-border transport services reflect goods-related economic activity in the services sector and, for Germany, are normally in deficit. Following the decline in both receipts and expenditure in this area resulting from the reduced trade in goods in 2020, both sides of the balance sheet were extended significantly beyond their pre-crisis levels during the year under review. However, this was only partially attributable to the renewed considerable rise in import and export volumes. Due to disrupted supply chains and higher energy prices, there was a massive increase in freight rates for international goods transport. Forwarding agents, shipping companies and air transport enterprises domiciled in Germany benefited from this, making gains of more than 41% over the previous year. However, domestic customers' expenditure with non-resident transport companies also grew, by 39%. As a result of this development, the deficit that had been accrued in this sub-account in the previous year widened only slightly by €2½ billion. Other components of the services account related to the goods trade, such as manufacturing, maintenance and repair services, experienced only marginal changes in their balances compared with 2020.

Significant one-off effect in income from charges for the use of intellectual property

The very steep rise in services receipts in 2021 was significantly bolstered by a one-off effect in charges for the use of intellectual property. In this item, expenditure rose by €3 billion, while receipts grew by just over €17 billion. Licence fees for vaccines played a major role in this context. As a result, the surplus grew massively in 2021 to €32 billion.

Other knowledge-based and business services recorded larger deficit

In the year under review, receipts and expenditure for other knowledge-based and business services saw somewhat below average growth. Here, the deficit for cross-border telecommunications and information services remained vir-

Major items of the balance of payments

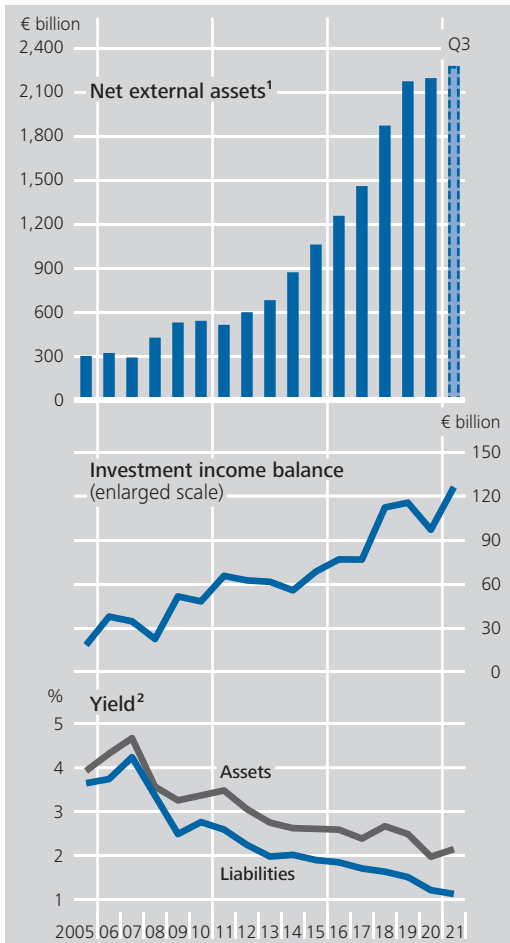
€ billion

Item	2019 ^r	2020 ^r	2021 ^r
I. Current account	+ 262.9	+ 238.7	+ 265.3
1. Goods	+ 215.5	+ 190.0	+ 192.4
Receipts	1,303.7	1,186.8	1,367.4
Expenditure	1,088.3	996.9	1,175.0
Memo item:			
Foreign trade ¹	+ 224.0	+ 180.4	+ 172.8
Exports	1,328.2	1,206.9	1,375.4
Imports	1,104.1	1,026.5	1,202.6
2. Services	- 18.1	+ 2.7	+ 0.3
of which:			
Travel	- 45.9	- 14.7	- 21.9
3. Primary income	+ 115.4	+ 98.8	+ 126.6
of which:			
Investment income	+ 115.5	+ 97.0	+ 126.1
4. Secondary income	- 49.8	- 52.7	- 54.1
II. Capital account	- 0.9	- 5.8	- 1.4
III. Financial account balance ²	+ 186.3	+ 216.5	+ 314.7
1. Direct investment	+ 75.6	- 3.5	+ 101.8
2. Portfolio investment	+ 69.7	+ 42.9	+ 255.1
3. Financial derivatives ³	+ 24.5	+ 96.3	+ 61.0
4. Other investment ⁴	+ 17.1	+ 80.9	- 135.0
5. Reserve assets	- 0.5	- 0.1	+ 31.9
IV. Errors and omissions ⁵	- 75.7	- 16.4	+ 50.9

¹ Special trade according to the official foreign trade statistics (source: Federal Statistical Office). ² Increase in net external position: + / decrease in net external position: -. ³ Balance of transactions arising from options and financial futures contracts as well as employee stock options. ⁴ Includes, in particular, loans and trade credits as well as currency and deposits. ⁵ Statistical errors and omissions resulting from the difference between the balance on the financial account and the balances on the current account and the capital account.

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Key indicators of the cross-border investment income balance



1 Direct, portfolio and other investment and reserve assets. Excluding financial derivatives. **2** Yields shown in terms of investment income/expenditure as a percentage of the annual average levels of foreign assets and liabilities. IIP as at the end of Q3 2021.
 Deutsche Bundesbank

tually unchanged, while sales in both directions rose considerably. In the first year of the pandemic, there had only been a small dip in an otherwise very strong trend. There was limited recovery in receipts in the area of other business services from abroad. By contrast, expenditure for research and development, professional, technical and commercial services, as well as management consultancy services grew to a greater extent. In net terms, the deficit in this category widened by around €4 billion.

Expansion in financial services

In the year under review, domestic enterprises generated a slightly smaller surplus from cross-border financial services and insurance and

pension fund services than they had in 2020. The main reason for this was the steep rise in expenditure for financial services usually provided by banks, which exceeded the growth on the receipts side. Sales of these services had also increased in the previous year due to relocations away from the financial centre of London as a result of Brexit. By contrast, cross-border insurance and pension fund services only recorded marginal changes in sales and in the balance compared with the previous year.

Following a decline in 2020, the surplus on the primary income balance widened again considerably in the year under review. Germany's receipts from abroad exceeded payments to other countries by €126½ billion and were thus higher than they had been immediately prior to the pandemic. Combined, cross-border compensation of employees and other primary income were almost balanced, as in the preceding year. The dominant balance sheet item was investment income. In the second year of the pandemic, corporate earnings saw a strong recovery. Net receipts from cross-border investment rose by €29 billion compared with the first year of the pandemic, amounting to €126 billion according to preliminary calculations. In this context, receipts to resident investors and capital donors from foreign investments grew massively by more than one-sixth, reaching a total of €213 billion. This rise is largely attributable to the upswing in receipts from direct investment, although this had also been preceded by a very sharp drop. By contrast, payments to foreign financiers saw hardly any growth, rising by ½%, and thus remained far short of the pre-crisis level. This was partly due to the fact that the rise in payments from residents to non-resident capital donors for their direct investment was somewhat counterbalanced by a corresponding decline in expenditure for portfolio investment.

Surplus in investment income grows to outstrip pre-crisis level

Much like in the year before, the deficit in the cross-border secondary income account widened slightly last year by €1½ billion to €54 billion. For Germany, unilateral payments grew

Deficit in secondary income account widened somewhat

considerably on both the receipts and expenditure side. Government payment flows were the major factor in this. Germany's contributions to the EU budget based on gross national income rose significantly in 2021. In the opposite direction, inflows to Germany included coronavirus-related special assistance from the EU budget, amongst others. Receipts from income and wealth taxes on persons resident abroad also increased slightly once again.

■ Capital movements

Underlying trends in capital movements

Germany's net capital exports again higher than in previous year

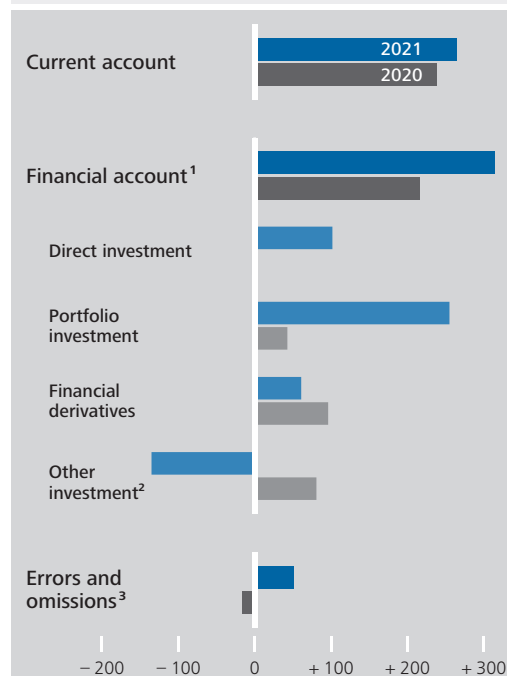
In 2021, Germany's current account surplus was mirrored by net capital exports of €314½ billion.⁵ Following the sharp economic downturn in 2020, enterprises and financial players started 2021 with confidence and hopeful for a rapid upswing, with vaccination campaigns being launched in some advanced economies at the end of 2020 and the beginning of 2021. The ongoing fiscal support and the strongly expansionary monetary policy also stimulated investors' risk appetite.

Financial markets influenced by risks: coronavirus pandemic and inflation concerns

However, the spread of new virus variants showed that the coronavirus pandemic was still far from over. Furthermore, in the second half of the year, unexpectedly high inflation rates and emerging inflation concerns increasingly proved to be a strain. Some central banks reacted by ushering in or at least signalling a tighter monetary policy stance: for example, the Fed in the United States tapered its asset purchases as of November, and the Bank of England increased its base rate (Bank Rate). The Eurosystem announced a marked reduction in the total envelope of its purchase programmes: the net purchases under the pandemic emergency purchase programme (PEPP) will be discontinued at the end of March 2022. Furthermore, in the first quarter of 2022, the Governing Council of the ECB expects to conduct net purchases under the PEPP at a lower pace than

Major items of the German balance of payments

Balances in € billion



¹ Net capital exports: +. ² Includes, in particular, loans and trade credits as well as currency and deposits. ³ Statistical errors and omissions.

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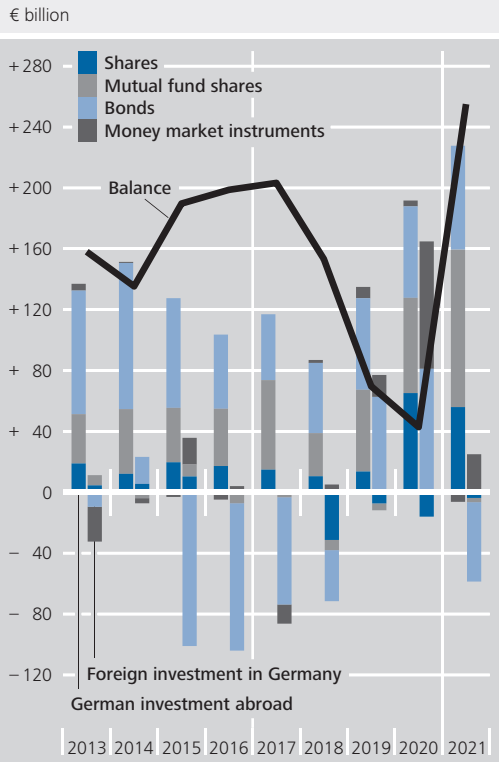
in the previous quarter. At the same time, it decided to temporarily step up purchases under the expanded asset purchase programme (APP) to a limited extent. This deteriorating economic environment was compounded by mounting political risks relating to the Russia-Ukraine conflict that had already begun to escalate in 2021.

Although underlying conditions were challenging at times, German stakeholders benefited from Germany's integration in the global economy in 2021 as well. Cross-border ties are a key component in the economic growth of domestic firms.⁶ Unhindered access to international financial markets opens up additional funding opportunities for enterprises seeking capital and allows investors to diversify their asset investments. The free movement of capital facili-

⁵ The difference between the current account and financial account balances is primarily attributable to statistical errors and omissions (€51 billion).

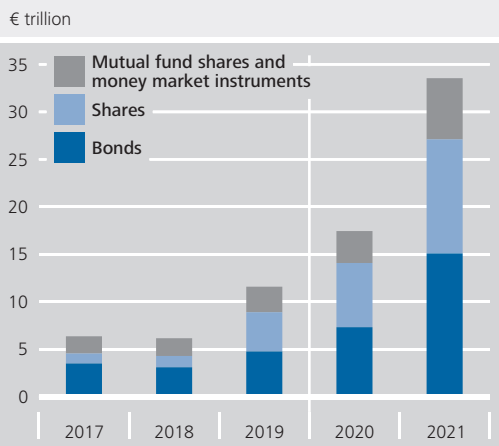
⁶ See Deutsche Bundesbank (2021a).

Portfolio investment in the German balance of payments



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Residents' gross transactions* with foreign securities



* Sum of purchases and sales.
 Deutsche Bundesbank

tates cross-border investment, whereas foreign capital controls may have a dampening effect on financial flows to and from Germany (see the box on pp. 47 ff.).

Overall, the cross-border transactions of domestic market participants resulted in net cap-

ital exports in portfolio investment, financial derivatives and direct investment. Once again, the Eurosystem's purchase programmes had a profound impact on portfolio transactions. As the Bundesbank largely acquired domestic debt securities under its asset purchases, residents partly shifted their portfolios towards foreign, often higher-yielding assets. Non-residents, too, disposed of German paper on balance. Other investment recorded net capital imports. While German TARGET2 claims reached an all-time high at the end of 2021, the liabilities of the Bundesbank and the rest of the banking system to non-euro area residents rose even more strongly than the Bundesbank's claims on the ECB.

Portfolio investment

In 2021, there were net capital exports of €255 billion in portfolio investment, which was much higher than the €43 billion recorded in 2020. The main cause of these high outflows was the fact that domestic investors boosted their portfolios of foreign interest-bearing securities and foreign equities significantly, by €221½ billion. For instance, they showed considerable interest in foreign mutual fund shares (€103½ billion), and there was also strong demand for foreign shares (€56 billion).

One reason for German investors' elevated foreign investment may lie in the search for yield associated with an increased appetite for risk: the stock markets in the United States, and even in other EU countries, for example, outperformed those in Germany. Accordingly, shares issued by firms in the US topped the list of purchases by German investors by a wide margin, at €26 billion. Furthermore, domestic investors added large volumes of equities from the Netherlands, the United Kingdom, Italy and Japan to their portfolios. Among the countries issuing mutual fund shares, Luxembourg and Ireland – two countries that are home to many investment companies – stood out.

Germany's portfolio transactions shaped by Eurosystem purchase programmes

Domestic investors acquired foreign mutual fund shares and equities ...

... focusing on shares issued by US corporations

Impact of foreign capital controls on German financial flows*

In recent years, numerous countries have made greater use of capital controls in order to shield themselves from undesirable external disturbances or prevent outflows due to internal imbalances. The administrative design of these interventions has varied considerably in the specifics, depending on the motive. International organisations such as the International Monetary Fund (IMF) and the Organisation for Economic Co-operation and Development (OECD) have engaged in in-depth discussions of the circumstances under which interventions in financial flows can be justified.¹

There is no consensus on the impact of capital controls in the academic literature. Klein (2012) argues that temporary capital controls have no marked effect on the growth of financial variables, on the real exchange rate or on growth in gross domestic product (GDP). By contrast, Erten and Ocampo (2016) conclude that capital controls can help to reduce macroeconomic instabilities, therefore lending themselves to use as countercyclical policy instruments. In their literature review, Erten, Korinek and Ocampo (2021) show that different methods for measuring financial flows are a key reason why empirical studies arrive at differing results.

A large number of studies have so far focused on emerging market economies. This analysis looks at whether foreign capital controls reduce cross-border financial transactions between Germany and its partner countries. It explicitly does not set out to assess whether or not the measures implemented were effective. The study uses declarations from the German balance of payments statistics for the period from January 1999 to December 2017. The transactions

are available at a monthly frequency, but for most parts of the analysis they are aggregated to annual values because the measures for capital controls only vary over the years. The data permit a much more detailed analysis than studies using macro-data, which have so far dominated the relevant literature.

The balance of payments data are augmented by information on capital controls. To this end, this analysis uses the database of Fernández et al. (2016). The authors generate binary variables of the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER) for a total of 99 countries to form aggregate indices. In doing so, they concentrate on the AREAER's capital account category and thus on direct effects on financial flows. This approach resembles that of Chinn and Ito (2008),² but unlike them, Fernández et al. (2016) define separate measures for inflows and outflows, broken down into ten different asset categories.

The first question addressed is whether capital controls in general reduce Germany's cross-border financial flows. To this end, the empirical study uses a panel setting with multiple fixed effects:

* This analysis is based on a research paper by Goldbach and Nitsch (2020).

¹ See IMF (2012) and OECD (2015).

² The measure applied by Chinn and Ito (2008) is used very frequently in the empirical literature. However, the measure only provides indications for total financial flows and thus is not broken down into inflows and outflows or into different asset categories. Furthermore, the measure is based on a broader approach: all four of the overarching AREAER categories (FX Regime, Export Proceeds, Capital Account and Current Account) are used. This index therefore also takes into account indirect effects on financial flows which are attributable to export restrictions, for example.

Effect of foreign capital controls on Germany's cross-border financial flows^o

Foreign variables	Baseline specification			Including control variables		
	Total finan- cial flows	German outflows	German inflows	Total finan- cial flows	German outflows	German inflows
Capital controls	- 0.386*** (0.107)			- 0.300*** (0.110)		
Foreign restrictions on inflows		- 0.341*** (0.119)			- 0.200** (0.086)	
Foreign restrictions on outflows			- 0.264*** (0.086)			- 0.226** (0.088)
Log GDP per capita				0.190*** (0.071)	0.325*** (0.064)	0.124 (0.086)
Stock market capitalisation				0.001* (0.001)	0.002*** (0.001)	0.001 (0.001)
Real GDP growth				0.005* (0.003)	0.007* (0.003)	0.004 (0.003)
Government debt-to-GDP ratio				- 0.001 (0.001)	- 0.001 (0.002)	- 0.001 (0.002)
Observations	1,067,969	783,020	719,432	975,559	718,066	653,574
Adjusted R ²	0.01	0.01	0.01	0.01	0.01	0.01

^o The dependent variables are measured in logarithms. Time-specific and declarant-asset-country-specific fixed effects are taken into account but not reported. Robust standard errors (clustered by countries) in brackets. *** Significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

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$$\begin{aligned} \text{Log}(\text{financial flows})_{dact} &= \alpha \\ &+ \beta \text{capital controls}_{ct-1} \\ &+ \{\gamma \text{control variable}_{ct-1}\} + \pi_{dac} + \sigma_t + \varepsilon_{dact} \end{aligned}$$

where $\text{financial flows}_{dact}$ is a measure for German financial flows (outflows from Germany, inflows to Germany, sum of outflows and inflows) of declarant d in asset category a with country c in year t ; $\text{capital controls}_{ct-1}$ is the (aggregate) measure of time-lagged capital controls from Fernandez et al. (2016) for country c in the previous year $t-1$; $\text{control variable}_{ct-1}$ is a vector with additional control variables; π_{dac} stands for combined fixed effects (declarant-asset-partner country), while σ_t represents time-specific fixed effects. Using the time-lagged variables serves as a way of taking into account, at least in part, possible endogeneity problems owing to reverse causality. Other control variables for cross-border financial flows are real GDP per capita, stock market capitalisation, real GDP growth and the government debt-to-GDP ratio.

The above table illustrates the estimation results for three different indices. The control variables are excluded in the baseline specification (columns 1 to 3); for comparison, the estimation results including control variables are shown in columns 4 to 6. This table indicates that both the aggregate index and the separate indices for controls on inflows and outflows have a significantly negative effect on Germany's bilateral financial flows. The results of the baseline specification and of the version with control variables are very similar. The control variables themselves have a significant effect on financial flows in some cases. How financial flows react to capital controls can depend on whether these controls are implemented on a temporary or long-term basis. Robustness checks suggest that temporary capital controls tend to have no ef-

³ The values of the variable "capital controls" vary between zero and one. The higher the value, the more capital controls are in place which affect cross-border financial flows. If a country introduces restrictions, fewer bilateral financial flows between Germany and that country are expected.

Extensive and intensive margin^o

Endogenous variables (baseline specification)	Total financial flows	German outflows	German inflows
Log value of financial flows	- 1.229*** (0.468)	- 0.730 (0.516)	- 1.178*** (0.396)
Log average value per entry	- 0.908** (0.401)	- 0.578 (0.431)	- 0.864** (0.341)
Log number of entries	- 0.320** (0.124)	- 0.105 (0.145)	- 0.386*** (0.101)
Log number of declarants	- 0.321** (0.127)	- 0.300* (0.157)	- 0.397*** (0.099)
Log number of asset classes	- 0.140* (0.073)	- 0.061 (0.084)	- 0.178** (0.077)
Log number of asset categories	0.011 (0.021)	- 0.007 (0.032)	- 0.024 (0.028)
Log average value per asset class per declarant	- 0.918** (0.380)	- 0.612 (0.418)	- 0.757** (0.319)
Endogenous variables (including control variables)	Total financial flows	German outflows	German inflows
Log value of financial flows	- 0.952** (0.391)	- 0.569 (0.444)	- 0.861*** (0.316)
Log average value per entry	- 0.737** (0.317)	- 0.474 (0.340)	- 0.634** (0.266)
Log number of entries	- 0.215 (0.149)	- 0.055 (0.169)	- 0.283*** (0.101)
Log number of declarants	- 0.216 (0.154)	- 0.217 (0.198)	- 0.317*** (0.108)
Log number of asset classes	- 0.097 (0.063)	- 0.056 (0.074)	- 0.097* (0.052)
Log number of asset categories	- 0.006 (0.018)	- 0.007 (0.031)	- 0.012 (0.023)
Log average value per asset class per declarant	- 0.730** (0.306)	- 0.526 (0.338)	- 0.532** (0.245)

^o Time-specific and country-specific fixed effects are taken into account but not reported. Robust standard errors (clustered by countries) in brackets. *** Significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.
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fect. The negative impact on cross-border financial flows is thus attributable to strict and long-term capital controls.

The microdata can be used to examine further mechanisms. For example, the effect of capital controls on market entries (“extensive margin”) and on the change in existing business relationships (“intensive margin”) can be assessed independently of one another. To do so, total German financial flows with a given partner country are decomposed into multiple elements, such as the number of declarants or the average volume of an ongoing entry (at the declarant-asset-month level).

The above table presents the estimation results. As before, the β coefficient is negative. Capital controls thus appear to have an effect on both the extensive (number) and intensive (average value) margin of bilateral financial relationships. However, roughly half of the coefficients are statistically insignificant. The strongest effect occurs for inflows to Germany. Other control variables generally do not affect the results.

In a final step, the effects of temporary capital controls within the European Union are studied. Starting in spring 2010, market participants increasingly began to have doubts about the solvency of the Greek government. This mounting nervousness was also felt by Cyprus, which had close

Effect of capital controls within the European Union on Germany's cross-border financial flows^o

Foreign variables	Baseline specification			Including control variables		
	Total financial flows	German outflows	German inflows	Total financial flows	German outflows	German inflows
Capital controls	- 0.393* (0.211)			- 0.636*** (0.074)		
Foreign restrictions on inflows		- 0.374** (0.140)			- 0.503*** (0.071)	
Foreign restrictions on outflows			- 0.374* (0.200)			- 0.617*** (0.075)
Real effective exchange rate				- 0.010* (0.006)	- 0.012** (0.005)	- 0.011 (0.007)
Inflation				1.343 (1.414)	1.239 (1.215)	1.042 (1.186)
Reserve assets				0.083 (0.098)	0.067 (0.091)	0.075 (0.088)
Long-term government bond yield				- 0.024** (0.009)	- 0.023** (0.010)	- 0.022** (0.009)
Stock market return				0.321** (0.125)	0.258** (0.116)	0.173 (0.110)
Observations	640,224	640,224	640,224	397,176	397,176	397,176
Adjusted R ²	0.04	0.03	0.03	0.05	0.04	0.04

^o The dependent variables are measured in logarithms. Time-specific and declarant-asset-country-specific fixed effects are taken into account but not reported. Robust standard errors (clustered by countries) in brackets. *** Significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.

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economic and financial ties to Greece. Concerned about the stability of its domestic banking sector, Cyprus implemented capital controls in March 2013, which remained in place until April 2015. The measures included a restriction on transferring money abroad. Greece imposed capital controls itself in June 2015, which were lifted in stages up until September 2019.

The previous approach is modified as follows: the study uses monthly data and constructs a balanced panel for European Union countries. A binary variable takes the value of one for Greece and Cyprus if capital controls are implemented in the respective country at the time. Control variables are the real effective exchange rate, inflation, reserve assets, long-term government bond yields and the stock market return.

The above table illustrates the estimation results. The previous results are confirmed.

Capital controls within the European Union also reduce Germany's cross-border financial flows. Since the capital controls were introduced in Greece and Cyprus during turbulent times, the control variables serve as further important factors. The estimated effect even becomes stronger as soon as these variables are taken into account in the regressions.

The aim of this study was to examine whether foreign capital controls reduce Germany's bilateral financial flows. The results support this thesis. Long-term measures, in particular, explain this relationship. In addition, capital controls introduced abroad reduce market entries by domestic players – which is to say, the establishment of financial relationships with foreign participants – (or lead to market exits) as well as transactions in existing business relationships. It was also demonstrated that capital controls within the European Union have this effect as well.

Also demand for euro-denominated foreign bonds ...

Foreign bonds were likewise in demand (€68½ billion). Compared with the previous year, however, investors shifted their focus from foreign currency bonds to instruments denominated in euro – despite the appreciation of other key currencies against the euro. These euro-denominated instruments made up over two-thirds of German net purchases. Among the public sector bonds denominated in euro, Italian government debt securities were particularly sought after, followed by instruments issued by Austria or the European Union. The latter instruments included the EU’s new issues to fund the European unemployment insurance programme (Support to mitigate Unemployment Risks in an Emergency – SURE) and the European Recovery and Resilience Facility (NextGenerationEU – NGEU).

function merely as a hub for international transactions and German institutions, too, have primarily repatriated their trading activities.

In 2021, foreign investors sold securities issued in Germany to the tune of €33½ billion on balance. In 2020, they had still been adding large volumes of domestic paper to their portfolios (€149 billion). The acquisition of structured debt securities from German issuers had played a major role at the time.⁷ This effect was much less significant in the year under review.

Net sales of German securities by non-residents ...

On the whole, foreign investors scaled back their holdings of German long-term debt securities in particular (€52 billion), with their sales of public sector bonds alone amounting to €75½ billion net. The Bundesbank’s purchases under the APP and the PEPP had an impact in this regard. By contrast, non-resident investors added private bonds issued in Germany to their portfolios on balance (€23 billion), stocking up on corporate bonds and divesting themselves of bank bonds. They also parted with German shares (€3½ billion) and mutual fund shares (€3 billion).

... explainable by asset purchase programmes

... and foreign currency bonds

German investors’ purchases of foreign currency bonds (€23½ billion) were spread across multiple countries, with issuance from the United States and the United Kingdom being the most significant. By contrast, domestic investors offloaded money market instruments issued abroad on balance (€6½ billion).

Withdrawal of United Kingdom from EU reflected in gross figures

The United Kingdom’s withdrawal from the EU left its mark on German portfolio investment in 2021 as well. The country finally left the European single market at the start of the year. The free trade agreement between the United Kingdom and the EU largely excludes financial services. In order to retain access to European financial markets, banks with an international focus have moved parts of their business out of the United Kingdom over the last few years to existing or newly established subsidiaries in Germany and other EU countries. This primarily relates to investment banking. This led, in particular, to a strong rise in the purchases and sales of foreign securities by financial institutions located here. Thus, transaction volumes virtually doubled from 2020 to 2021. That said, this increase in gross flows was not reflected in the aforementioned net portfolio investment figures for Germany, as the German branches of international commercial banks frequently

This development is consistent with the picture that German equity indices have underperformed against the indices of other advanced economies and that the euro has depreciated against key currencies. However, non-residents parked more liquidity in domestic money market instruments (€25 billion), of which around two-fifths were the structured securities mentioned earlier. The fact that the Federal government issued a large volume of short-dated bonds also became noticeable in the first quarter.

Financial derivatives (which are aggregated to form a single item in the balance of payments) recorded net capital exports of €61 billion in

⁷ In turn, the German affiliates involved purchased external assets in the form of economically equivalent derivatives or fixed-term deposits within their financial group, and they are recorded under financial derivatives or other investment. See Deutsche Bundesbank (2021b).

Financial account

€ billion

Item	2019 ^r	2020 ^r	2021 ^r
Financial account balance ¹	+ 186.3	+ 216.5	+ 314.7
1. Direct investment	+ 75.6	- 3.5	+ 101.8
Domestic investment abroad ²	+ 139.3	+ 119.5	+ 163.7
Foreign investment in the reporting country ²	+ 63.7	+ 122.9	+ 61.8
2. Portfolio investment	+ 69.7	+ 42.9	+ 255.1
Domestic investment in foreign securities ²	+ 135.0	+ 191.7	+ 221.5
Shares ³	+ 13.7	+ 65.2	+ 56.0
Investment fund shares ⁴	+ 53.7	+ 62.6	+ 103.4
Short-term debt securities ⁵	+ 7.4	+ 3.9	- 6.3
Long-term debt securities ⁶	+ 60.2	+ 60.1	+ 68.3
Foreign investment in domestic securities ²	+ 65.3	+ 148.9	- 33.6
Shares ³	- 7.3	- 16.0	- 3.7
Investment fund shares	- 4.5	+ 1.9	- 2.8
Short-term debt securities ⁵	+ 14.4	+ 83.7	+ 25.0
Long-term debt securities ⁶	+ 62.7	+ 79.3	- 52.2
3. Financial derivatives ⁷	+ 24.5	+ 96.3	+ 61.0
4. Other investment ⁸	+ 17.1	+ 80.9	- 135.0
Monetary financial institutions ⁹	+ 19.5	- 112.8	- 46.5
Short-term	+ 12.1	- 71.3	- 15.9
Long-term	+ 7.4	- 41.6	- 30.7
Enterprises and households ¹⁰	- 29.6	+ 51.7	+ 18.7
Short-term	- 10.9	+ 27.1	+ 8.6
Long-term	- 18.7	+ 24.6	+ 10.1
General government	- 1.5	+ 9.9	- 3.8
Short-term	+ 1.9	+ 11.1	- 5.3
Long-term	- 3.4	- 1.2	+ 1.5
Bundesbank	+ 28.7	+ 132.2	- 103.4
5. Reserve assets	- 0.5	- 0.1	+ 31.9

¹ Increase in net external position: + / decrease in net external position: -. ² Increase: +. ³ Including participation certificates. ⁴ Including reinvestment of earnings. ⁵ Short-term: original maturity of up to one year. ⁶ Long-term: original maturity of more than one year or unlimited. ⁷ Balance of transactions arising from options and financial futures contracts as well as employee stock options. ⁸ Includes, in particular, loans and trade credits as well as currency and deposits. ⁹ Excluding the Bundesbank. ¹⁰ Includes the following sectors: financial corporations (excluding monetary financial institutions) as well as non-financial corporations, households and non-profit institutions serving households.

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2021, a clear decline from the year before (€96½ billion). The main reason behind this decrease was fewer compensatory intra-group transactions in the form of over-the-counter options for the aforementioned transactions in structured debt securities. Nevertheless, they still account for just under half of the total balance of derivatives. On balance, a small volume of funds was invested in options and forward contracts. Cross-border forward and futures contracts relating to electricity and gas recorded net capital imports, whereas they had still registered net capital exports in 2020.

Intra-group transactions still dominate net capital exports of financial derivatives

Direct investment

Despite the persistently challenging environment caused by the coronavirus pandemic, global direct investment flows rebounded in 2021 after having declined considerably in 2020. The United Nations Conference on Trade and Development estimates that global direct investment flows rose by 77% on the year in 2021 and were thus higher than before the outbreak of the pandemic.⁸ The observed recovery varied considerably not only across regions but also across different sectors and types of cross-border direct investment. For example, greenfield investment activity remained much lower on average across all industrial sectors than prior to the pandemic. By contrast, there were higher flows of cross-border funding for infrastructure in many economic sectors through project financing. Mergers and acquisitions also picked up significantly, especially in the services sector. All in all, direct investment flows to advanced economies rose much more strongly than those to developing countries. A higher number of cross-border mergers and acquisitions were also carried out in advanced economies than in other countries.

Global direct investment flows up significantly again in 2021

German enterprises were no exception in this regard. Compared with the preceding year,

⁸ See United Nations Conference on Trade and Development (2022).

Substantial net capital exports due to German investment abroad

they stepped up their cross-border exposures considerably in 2021 through direct investment. Conversely, non-resident enterprises likewise boosted their direct investment in Germany, albeit to a lesser extent than in 2020. Overall, the second year of the pandemic presented German enterprises with an international focus with major challenges, however.⁹ In addition to the adverse effects of the coronavirus pandemic, geopolitical tensions also caused difficulties for enterprises operating abroad. Moreover, as mentioned earlier, the United Kingdom finally exited the European single market on 1 January 2021, resulting in a new playing field for cross-border investment. Business activities had already been relocated – to Germany in some cases – in the run-up to the UK’s withdrawal.

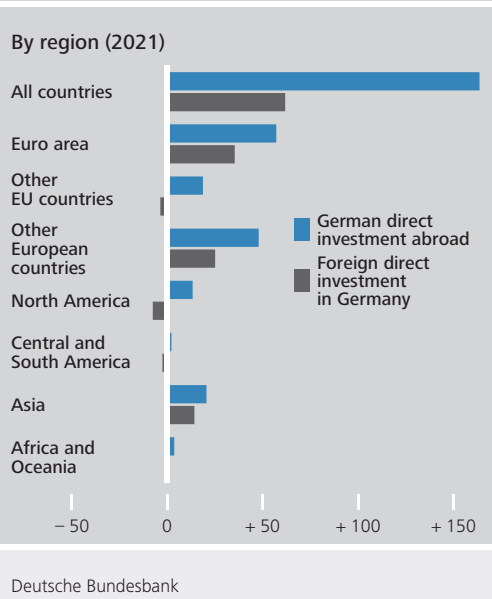
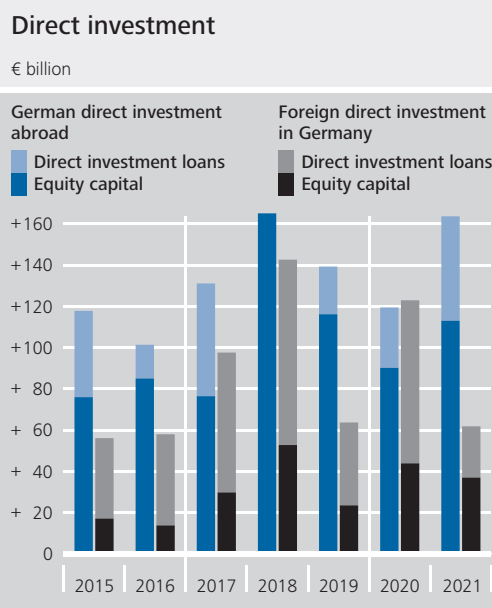
Looking at direct investment by German investors, 2021 saw, on balance, net capital exports of €102 billion – a record high when considered over the long term. This was in contrast to 2020, which had seen modest net capital imports.

German enterprises again expanded their equity investments ...

German enterprises invested €163½ billion abroad in 2021, around €44 billion more than in 2020. Once again, they strongly expanded their equity investments in foreign affiliates in particular (€113 billion). Similarly sized portions of these funds were for equity capital in the narrower sense and reinvested earnings. Comparatively high cross-border transaction values were recorded for enterprises specialised in providing professional and technical services.¹⁰ Last year, too, cross-border corporate takeovers by enterprises domiciled in Germany played a significant role in terms of volume.¹¹

... but also made much more credit available to affiliated enterprises

Enterprises domiciled in Germany issued €50½ billion in intra-group credit to foreign affiliated enterprises in 2021, significantly more than in 2020 (€29½ billion), predominantly in the form of loans. These loans were issued to subsidiaries and affiliates abroad. Subsidiaries domiciled in Germany also made large amounts of funds available to their foreign parent enterprises.



German enterprises engage in direct investment in many countries all over the globe. In 2021 alone, they made investments in over 60 countries. A large part (around 75%) of those

Europe and the United States key destinations for German direct investment

⁹ See Association of German Chambers of Industry and Commerce (2021a, 2021b).

¹⁰ The data refer only to decipherable net transfers used to augment equity capital.

¹¹ According to Refinitiv (Thomson ONE) data, in 2021 roughly €50½ billion was used to finance takeovers of companies domiciled abroad and previously under foreign ownership where the German stake after the transaction is at least 10%. This was somewhat less than in 2020, when the takeover value was given as €58½ billion. The time at which mergers and acquisitions are captured in the balance of payments can, however, differ from that recorded by Refinitiv, meaning that the reported figures are not directly comparable.

investments in 2021 were in partner countries in Europe. Just over a third of all German direct investment was thus made in other euro area countries. Within the euro area, particularly large amounts flowed into Luxembourg and the Netherlands, both significant holding company locations. Outside the euro area but still within Europe, comparatively high amounts were made available to affiliated enterprises in Switzerland and the United Kingdom. Outside Europe, the United States was the recipient of considerable German investment.

Inflows of capital from abroad via equity investment and intra-group lending

Foreign enterprises provided domestic enterprises with direct investment funds totalling €62 billion in 2021. This was about half the amount of funds provided to affiliated enterprises in 2020 in net terms, a year in which the inflow of capital was fairly large even in comparison to previous years. Foreign firms boosted the equity capital they provided to German branches by €37 billion. Moreover, they also made €25 billion in loans available to affiliated enterprises domiciled in Germany, largely via trade credits.

Considerable investment from the UK and euro area countries

Direct investment by firms from the United Kingdom was especially high (€23 billion). This was dominated by intra-group lending, which has been noticeably gaining importance over the last few years, not least because of relocation of business activities to Germany. Enterprises in Germany received a combined €35½ billion from euro area countries in 2021. The majority of these funds were also distributed via intra-group lending.

Other investment

Net capital imports in other investment

Other investment, comprising loans and trade credits (where these do not constitute direct investment) as well as bank deposits and other assets, saw net capital imports of €135 billion in 2021. In 2020, other investment gave rise to net capital exports of €81 billion. The balance of other investment often sees high volatility

– including changes in sign – but the reversal of trend in 2021 was particularly large.

This was largely due to considerable net inflows reported via the banking system. The Bundesbank's liabilities to non-residents arising from currency and deposits increased by €196 billion in 2021. For the most part, the increase in foreign liabilities was driven by a rise in deposits of non-euro area residents at the Bundesbank. This includes the balances of foreign central banks, monetary authorities, international organisations and commercial banks. These deposits often show a clear temporary rise at the end of a given year – as was the case in 2021.¹² The Bundesbank's liabilities arising from the allocation of euro banknotes within the Eurosystem went up by €36½ billion last year. Above and beyond that, the counterpart of special drawing rights allocated by the IMF recorded as a liability also rose strongly (see the reserve assets section on pp. 55 f. for further information).

Bundesbank accounts record net inflows

The Bundesbank's gross claims on non-residents also increased (by €123½ billion) in 2021. These primarily reflected the Bundesbank's higher TARGET2 claims on the ECB (€124½ billion). Their recent increase mirrored increased asset purchases as part of the APP and PEPP. The close relationship between the development of the Bundesbank's TARGET2 claims and asset purchases by Eurosystem central banks had already been observed in previous years.¹³ In 2021, the corresponding rise in German TARGET2 claims was, however, comparatively small. This was down to the countervailing effects of the financing and outpayment flows resulting from the European support programmes NGEU and SURE.¹⁴ On balance, the transaction-related increase in liabilities was €103½ billion larger than the increase in the Bundesbank's claims on non-residents in 2021.

TARGET2 claims rose less strongly than the effects of the asset purchase programmes suggested

¹² In January 2022, non-euro area residents reduced their deposits parked at the Bundesbank significantly again.

¹³ See Deutsche Bundesbank (2020, 2019, 2017a, 2017b, 2016).

¹⁴ See Drott et al. (2022).

Other MFIs also recorded net capital imports

Transactions via the accounts of other monetary financial institutions (MFIs) also saw net inflows of capital into Germany in 2021. These amounted to €46½ billion net. This was primarily down to higher deposits by foreign institutions, particularly group-affiliated banks. Additionally, deposits by foreign enterprises and households with domestic MFIs also rose on a smaller scale. In lending business, MFIs domiciled in Germany (excluding the Bundesbank) increased their deposits with foreign institutions. Above and beyond that, they issued more funds to foreign borrowers. On balance, their loan claims on foreign banks rose, primarily vis-à-vis group-affiliated banks, more strongly than their claims on enterprises or households abroad.

Net capital exports via non-banks' transactions

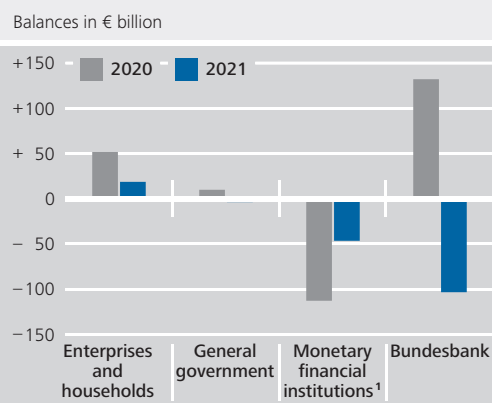
Other investment by non-banks led to net outflows of funds abroad. At €15 billion, net capital exports in 2021 were nevertheless much lower than in 2020 (€61½ billion). In this context, enterprises' and households' transactions produced net capital exports of €18½ billion. They issued loans to foreign business partners and again increased their deposits at foreign commercial banks. As with financial derivatives, this reflected (to an extent) counterpart entries to their transactions involving structured securities issued in Germany. Unlike in 2020, their liabilities to non-residents also rose steeply as they took out more loans – especially short-term loans – from overseas. By contrast, transactions by general government gave rise to net capital imports of around €4 billion.

Reserve assets

Reserve assets rose primarily due to large allocation of special drawing rights

The Bundesbank's reserve assets rose by €32 billion in 2021 on account of transactions. Of this, €31 billion was accounted for by its share of new special drawing rights allocated by the IMF,¹⁵ which, in August 2021, had decided upon and implemented a large allocation of special drawing rights to its member countries.¹⁶ Special drawing rights simultaneously constitute a liability and an asset on the Bun-

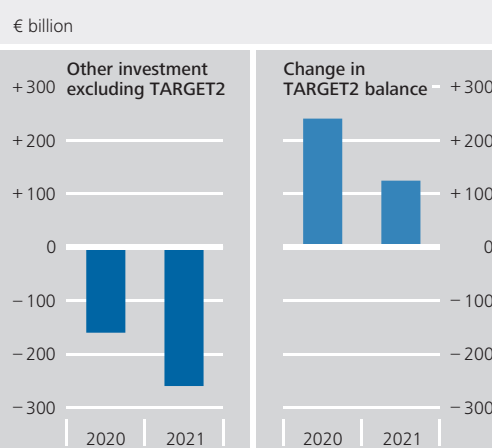
Other investment* broken down by sector



* Includes, in particular, loans and trade credits as well as currency and deposits; net capital exports: +. ¹ Excluding the Bundesbank.

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TARGET2 and other investment excluding TARGET2*



* Net capital exports: +.

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desbank's balance sheet. On the one hand, they are recognised as reserve assets in the Bundesbank's external position. On the other, an equal counterpart entry is made on the liabilities side as an adjustment item for special drawing rights. The allocated special drawing rights thus do not change a country's net external position and instead create a balance sheet extension.

The international reserve holdings are also influenced by balance sheet adjustments which,

¹⁵ See Deutsche Bundesbank (2022).

¹⁶ See International Monetary Fund (2021).

*Balance sheet
value increase
due to market
price effects*

in compliance with internationally agreed accounting standards, are not recognised in the balance of payments. The end-of-year revaluation of the reserve assets resulted in an increase of nearly €10½ billion in 2021. This was

due chiefly to rising gold prices. On the reporting date of 31 December 2021, the value of Germany's reserve assets stood at €261½ billion.

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