Balance of Payments Report
2019

Czech National Bank —— Balance of Payments Report —— 2019

CNB CZECH NATIONAL BANK

www.cnb.cz

Contents

This publication offers an analysis of the evolution of the main items of the Czech Republic's balance of payments in the past year, supplemented with short academic articles focusing on the balance of payments and international trade. As we use preliminary balance of payments data subject to revisions, the data from previous years may differ in different issues of this publication. The electronic version, including the previous issues, can be downloaded from the CNB website https://www.cnb.cz/en/monetary-policy/

Editors and authors

The publication is produced by the External Economic Relations Division of the CNB's Monetary Department and is freely distributable. Authors: Oxana Babecká (editor), Ladislav Prokop and Vladimír Žďárský.
This issue also features articles written by Volha Audzei, Jan Brůha, Luboš Komárek and Ivan Sutóris.

Cut-off date for data: 30 April 2020
Publication date: 1 June 2020

Foreword

Dear Readers,

In front of you lies a new CNB Balance of Payments Report, which will be published regularly every year in early June. The Czech National Bank aims to use this publication to present unique information to experts and academics from the recording of flows between the Czech Republic and the rest of the world. Nevertheless, neither this information nor publication is entirely new. Sections on the balance of payments can also be found in the key monetary policy document, the Inflation Report. Moreover, an eponymous publication with extensive statistical annexes used to be published years ago. The current publication has been expanded to include thematic analyses and enriched by economic research studies, which I believe add spice to this intellectual meal.

So, what does this publication offer? The Balance of Payments Report contains information about external economic (im)balances and the level of their sustainability, explains and anticipates pressures affecting the exchange rate, and offers, for example, measures of long-term competitiveness. As you can see, it is quite a lot.

I personally consider the balance of payments information to be a unique source of insight, which X-rays the economy and especially its relations with the external environment from a different angle. I believe this publication will help many readers to tap into the secrets of the balance of payments, which in itself is not a simple discipline. Those of you who are familiar with the latest International Monetary Fund manual (BPM6), based on which this publication is compiled, will surely agree.

I hope you will enjoy the publication.

Vojtěch Benda, CNB Bank Board member

I. SUMMARY

The Czech Republic's balance of payments was characterised by a switch from a slight current account surplus to a moderate deficit in 2019.[1] This change was due mainly to growth in the primary income deficit (growth in direct investment earnings of non-residents[2] and a drop in the surplus on compensation of employees) and, to a lesser degree, a decline in the services surplus. Counteracting the growth in the current account deficit was renewed growth in goods surplus, achieved amid only weak growth abroad and, conversely, continued strong growth in domestic demand (the increase in the surplus was associated mainly with a fall in the prices of energy commodities). The secondary income deficit was virtually unchanged. As regards the Czech Republic's external balance in 2019, the trajectory of its current account, which remains close to zero relative to gross domestic product, can still be considered completely safe.[3]

The capital account surplus remained almost unchanged year on year, as growth in income from the EU virtually offset sizeable net growth in expenditure on emission permits. According to preliminary results, the current account and the capital account ended in very slight deficits of 0.1% of GDP overall. The observed stability of the exchange rate of the koruna against the euro thus essentially continued to reflect the existing good external competitiveness of the Czech economy.

The unwinding of the until recently quite sizeable current account and capital account surpluses has significantly reduced the room for a net outflow of capital on the financial account. The very small net outflow of capital from the Czech Republic was linked chiefly with a drop in non-residents' deposits in the domestic banking sector and growth in the CNB's reserve assets (associated with a surplus on operations vis-à-vis the EU and returns on international reserves). The slightly rising interest rate differential of the koruna vis-à-vis major currencies essentially maintained the extent of koruna positions, created in the Czech Republic by non-residents before the exit from the CNB's exchange rate commitment, at the level recorded in late 2018. Moreover, it stimulated residents to a further gradual reduction of foreign debt asset holdings and simultaneously aroused their interest in cheaper foreign funding, particularly in the form of foreign currency bond issues. The net inflow of direct investment capital continued, albeit at a slightly lower volume. It was linked solely with the surplus on reinvested earnings. In real capital flows, a net capital outflow very slightly predominated. The developments in the area of cross-border capital flows thus did not create any room for major movements of the koruna either.

1 from 0.4 % to -0.4% of GDP

2 The year-on-year growth in the primary income deficit and the annual change in the current account were due largely to a deficit in reinvested earnings (a year-on-year rise of almost CZK 50 billion). This item is an estimate, which was revised to an extent of up to several tens of billions of korunas in the past.

3 In the Macroeconomic Imbalance Procedure (MIP), a movement within a range (of between -4% and +6 % of GDP) is considered to be the equilibrium.

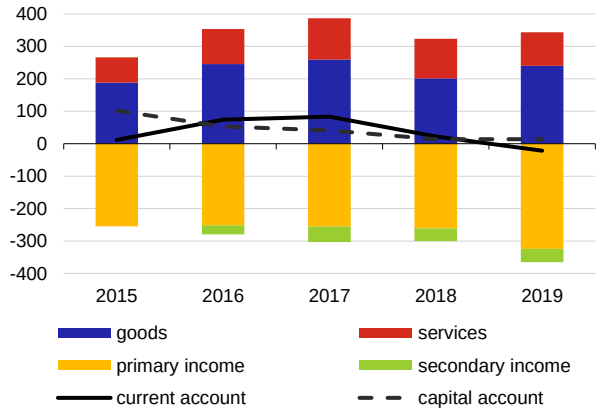
II. CURRENT ACCOUNT

After five years of larger or smaller surpluses, the current account switched to a deficit in 2019, which was associated mainly with a widening of the primary income deficit. The current account deficit amounted to CZK 21.3 billion, with the current account balance falling by almost CZK 44 billion year on year (see Chart 1). The current account-to-GDP ratio declined by 0.8 pp compared to the previous year to -0.4% (see Chart 2). The switch of the current account from a surplus to a deficit was due mainly to a widening of the primary income deficit. The year-on-year growth in foreign investors' earnings reinvested in the Czech Republic had a particularly strong impact. Compensation of employees and interest on portfolio investment paid to non-residents also increased. Rapid growth in expenditure on research and development services also contributed markedly to the drop in the current account. By contrast, counteracting the drop in the current account balance was the growth in the goods surplus, which was – despite weakening external demand – associated with renewed growth in exports of motor vehicles and a simultaneous decline in total goods imports, partly related to a drop in fuel prices. A year-on-year increase in receipts from computer services also contributed markedly to the decline in the overall deficit.

The high long-term goods and services surpluses, and the goods surplus in particular, are linked mainly with the activities of domestic corporations owned by non-residents. Their export performance is reflected not only in high goods and services surpluses, but also in their profits, which largely eliminate the impact of the goods and services surplus on the current account. Other transfers abroad by non-residents (particularly the growth in the volume of wages paid to foreign workers) have also been recently lowering the current account balance.

Chart 1: Current account and capital account

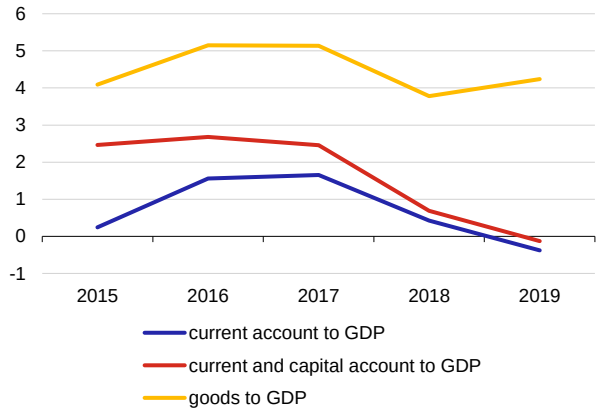
(CZK billions)



Source: CNB

Chart 2: Ratios of current account, capital account and goods to GDP

(% of GDP)



Source: CNB, CZSO, CNB calculations

II.1 GOODS AND SERVICES

As usual, the goods and services balance recorded a high surplus in 2019, which increased year on year due to rapid growth in the goods surplus. The overall surplus amounted to CZK 343.4 billion, with the goods surplus making up about two-thirds. Overall, it rose by more than CZK 20 billion year on year, with about half of the growth in the goods surplus being offset by a decline in the services surplus. The year-on-year growth in total trade turnover amounted to 2.4%, a slowdown of 1.6 pp from a

year earlier. The growth in the overall surplus was simultaneously linked with a renewed lead of growth in exports over growth in imports (of 0.3 pp).

II.1.1 Goods

The goods balance was affected mainly by a drop in fuel prices, slower growth in total domestic demand and a simultaneous weakening of external demand. The goods surplus increased to CZK 239.8 billion following a one-year annual decline.[4] About one-quarter of the surplus growth of almost CZK 39 billion was related to price developments resulting from a positive year-on-year change in the terms of trade for the deflators of goods exports and imports. Developments in real terms, affected by the different impacts of domestic and external demand, accounted for around three-quarters of the growth.

As regards the export and import price indices,[5] the goods balance[6] was affected the most by the impact of the positive year-on-year change in the terms of trade for miscellaneous manufactured articles. As the category of miscellaneous manufactured articles is significant in terms of volume, the year-on-year drop in the surplus in real terms was largely offset by price developments at an already relatively small positive change in the terms of trade[7]. Prices in the category of mineral fuels and lubricants and in the category of manufactured goods classified by material (semi-finished products) also made a significant contribution to the growth in the overall surplus at current prices. By contrast, a deep and negative change in the terms of trade in the category of inedible non-energy raw materials was the biggest factor acting in the opposite direction, i.e. towards a decline in the overall surplus. However, the total impact of price developments changed in the course of the year due mainly to fuel and machinery prices. The terms of trade recorded the highest positive change in Q3, while in the remaining quarters of the year the positive year-on-year change in the terms of trade was only very moderate.

The dynamics of goods exports during the year were affected the most by weakening foreign demand and exports of motor vehicles. Exports increased year-on-year in the first three quarters, but in Q4 they recorded a moderate decline. The peak of the growth in Q3 and the subsequent drop at the end of the year were strongly affected by the previous year's base, first in connection with deferred motor vehicle exports due to the formalities related to stricter emission limits and then the actual export of the deferred deliveries. Moreover, growth in effective external demand slowed below 1% in Q4 and the slight year-on-year depreciation of the koruna against the euro observed in the previous three quarters turned into slight appreciation. Exports of goods thus recorded an increase of 2.2% in 2019 as a whole, which was a slight slowdown (of 0.6 pp) from a year earlier.

Turning to product classification,[8] motor vehicles (including car parts, excluding motorcycles) continued to be the most important export category. Their exports exceeded CZK 1,000 billion, accounting for 27.7% of total goods exports (see Chart 3). Together with the other four categories (machinery and equipment; computer, electronic and optical products; electrical equipment and fabricated metal products), these five largest-volume categories made up almost two-thirds (63.9%) of total exports. The growth in motor vehicle exports was also the biggest contributor to the year-on-year

—

4 However, the surplus remained slightly below the levels recorded in 2016 a 2017.

5 broken down according to the SITC goods classification

6 at current prices

7 The highest positive year-on-year change in the terms of trade (of 7.8%) was recorded in the category of beverages and tobacco.

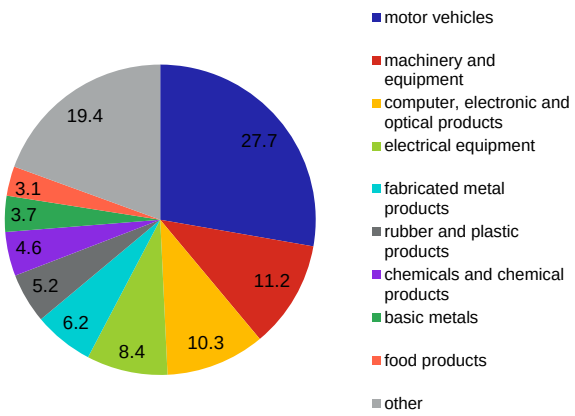
8 The analyses of the goods (product) and territorial structures are conducted on the basis of statistics on international trade in goods.

growth in total export (of CZK 38 billion, or 3.9%) by a large margin. Exports of this category simultaneously became the driver of total goods exports again after a one-year hiatus. By contrast, the deepest decline was recorded for exports of basic metals (of CZK 11.3 billion, or 7.6%).

Turning to the territorial structure, most goods exports continued to go to the EU(28). Exports to the EU accounted for 83.5% of total exports, up by 1.4% year on year. The largest trading partner was, as usual, Germany, which accounted for almost one-third (31%) of total exports. However, its share in exports declined marginally year on year. Germany was trailed by Slovakia and Poland some way behind. The largest increases were recorded for exports to Slovakia (of CZK 12.7 billion) and Germany. As regards non-EU Member States, the highest exports headed to the Russian Federation and the USA. However, they each had only a 2.3% share in total exports.

Chart 3: Commodity structure of goods exports in 2019

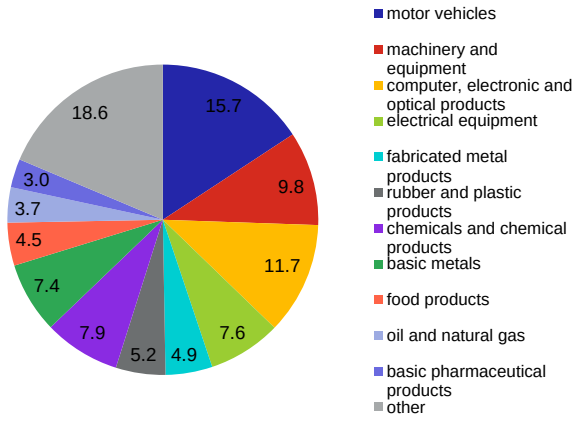
(CZ-CPA product classification; %)



Source: CZSO, CNB calculations

Chart 4: Commodity structure of goods imports in 2019

(CZ-CPA product classification; %)



Source: CZSO, CNB calculations

During 2019, the growth dynamics of imports was affected especially by weakening domestic demand and a drop in prices of fuels, especially gas. As in the case of exports, imports of goods recorded growth in the first three quarters. In Q4, the slowing growth switched to a slight decline despite relatively strong growth in domestic demand and a weaker drop in fuel prices in this quarter. The drop in imports was due probably to weak external demand and increasing uncertainty regarding future economic developments abroad associated with a decline in investment imports and, owing to high import intensity of exports, also with a decline in imports for intermediate consumption. Goods imports grew by 1.2% in 2019 as a whole, a slowdown of 3.7 pp from a year earlier.

As in the case of exports, motor vehicles (including car parts, excluding motorcycles) represented the largest import category in terms of product classification. However, their imports accounted for just 15.7% of total goods imports (see Chart 4). Together with the other four most important import categories (computer, electronic and optical products; machinery and equipment; chemicals and chemical products and electronic equipment), the share of these five categories in total imports slightly exceeded one-half (52.8%). The commodity structure of imports is thus diversified more evenly than that of exports. The year-on-year growth in total imports was due most of all to growth in food product imports (of CZK 11.5 billion, or 7.8%) and growth in motor vehicle imports. By contrast, the deepest decline in absolute terms was recorded for imports of basic metals (of almost CZK 17 billion, or 6.1%).

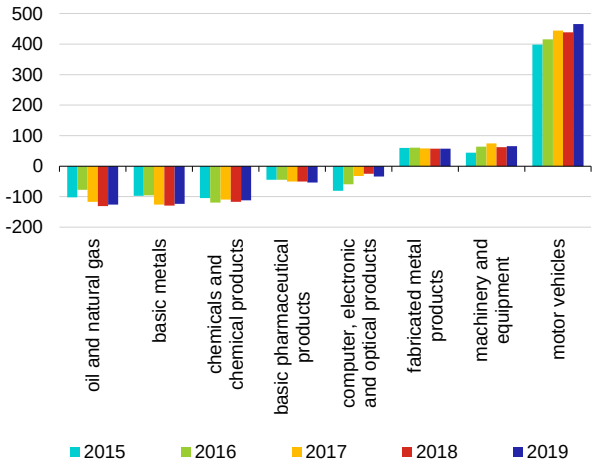
Turning to the territorial structure, most goods imports continued to come from the EU(28). Imports from the EU accounted for 66.1% of total imports. However, they declined by 0.9% year on year, due mainly to a sharp drop in imports from Slovakia. The largest trading partner was Germany,

whose share in total imports exceeded one-quarter (26%). A long way behind were imports from Poland and Slovakia. As regards non-EU Member States, the largest imports came from China. They accounted for 11% of total imports, which made China the second-largest import partner. By territory, imports from China also recorded the highest absolute year-on-year growth (of CZK 20 billion, or 5.4%).

Turning to the product classification, the biggest contributor to the overall surplus was the motor vehicle surplus. It amounted to CZK 466 billion, a year-on-year increase of more than CZK 27 billion. This also represents the biggest contribution to the year-on-year growth in the overall balance (see Chart 5). By contrast, the oil and gas deficit, which exceeded CZK 126 billion, contributed the most to the decrease in the overall surplus. Basic metals, and chemicals and chemical products also recorded deficits of more than CZK 100 billion. An increase in the deficit on computer, electronic and optical products (of more than CZK 8 billion) was the strongest factor fostering a year-on-year decrease in the surplus.

Chart 5: Major commodity categories by surplus/deficit

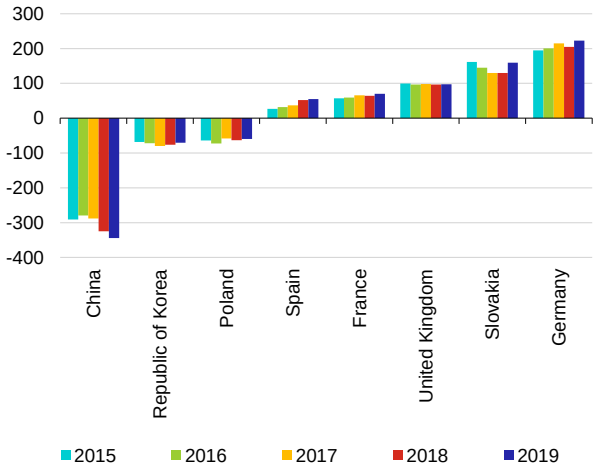
(CZ-CPA product classification; CZK billions)



Source: CZSO

Chart 6: Trade in goods with the largest partners by surplus/deficit

(territorial structure; CZK billions)



Source: CZSO

Turning to the territorial structure, the Czech Republic continued to generate a high trade surplus with the EU; however, the surplus was reduced significantly by a trade deficit with non-EU Member States. The goods surplus with the EU exceeded CZK 735 billion, up by more than CZK 62 billion on a year earlier. The highest surplus was as usual recorded in trade with Germany (of almost 223 billion, see Chart 6). Large trade surpluses were also recorded with Slovakia and the United Kingdom. The rapid year-on-year growth in the trade surplus with Slovakia (of almost CZK 30 billion) also represented the biggest contribution to the growth in the overall surplus. By contrast, trade with non-EU Member States recorded a deficit of 570 billion, an increase of more than CZK 10 billion. Trade with China accounted for the largest part (CZK 344 billion) of this deficit. The widening of the trade deficit with China (of CZK 19 billion) was also the strongest factor counteracting the growth in the overall surplus. The deficit in trade with China thus represented the largest territorial imbalance in trade in goods.

The large goods surplus has long been associated with the domestic specialisation in the car industry and car parts.[9] It has been produced on the "open" EU market. The dominance of manufacturing and its high export orientation (coupled with relatively narrow branch and territorial diversification) makes the Czech Republic extremely dependent on external developments.

II.1.2 Services

Although the share of services in total goods and services turnover was a mere 15.6% in 2019[10], their surplus accounted for a major part of the overall balance. It amounted to CZK 103.7 billion, having declined annually for the second consecutive year, this time by more than CZK 17 billion. The total surplus was a result of import growth outpacing, quite significantly, export growth (by 4.4 pp). The decline in the nominal surplus was a consequence of developments in real terms, one-third of which was, however, offset by a favourable price effect related to a positive annual change in the terms of trade.

Growth in credits from services gradually slowed during the year, reflecting thus mostly weakening external demand. Credits from services nonetheless recorded an annual increase of 4.4% for the year as a whole, having accelerated slightly compared to a year earlier. From the perspective of a detailed breakdown, the largest credit items included travel (especially personal), transport (road freight transport in particular) and other business services (mainly professional – accounting, auditing – and management consulting services). These three categories accounted for around two-thirds of total credits (67.3%). The annual increase in total credits in absolute terms was clearly attributable to growth in credits from computer services (up by more than 15 billion, i.e. more than a half of the increase).

Turning to the territorial structure, a major share of credits (two-thirds) was attributable to EU(28) countries. Germany remained the largest trading partner, accounting for almost one-fifth of total credits (19.1%), followed by the USA and Slovakia. The largest absolute increase in credits was also recorded in trade with the USA and was a result of an increase in credits from computer services.

Fast growth in debits for services reflected a still sizeable rise in domestic demand at the start of the year, but was mainly due to high one-off debits at the end of the year. Debits for services recorded an annual increase of 8.8% for the year as a whole, up by 2.4 pp compared to a year earlier. As in the case of credits, the largest debit items included other business services (especially professional and management consulting services), transport (road freight transport in particular) and travel (mainly personal). These three categories accounted for almost three-quarters of total debits (73.6%). Annual growth in total debits in absolute terms was due mainly to other business services, especially electromobility-related debits for research and development.

Turning to the territorial structure, a major share of debits for services also went to the EU(28), exceeding 72%. Germany was the largest trading partner, accounting for a quarter of total debits (25.5%), followed by Slovakia and the United Kingdom. The highest absolute increase in debits (almost CZK 22 billion, almost a half of the total increase) was recorded due to a high one-off debit for research and development in trade with Germany in Q4.

—

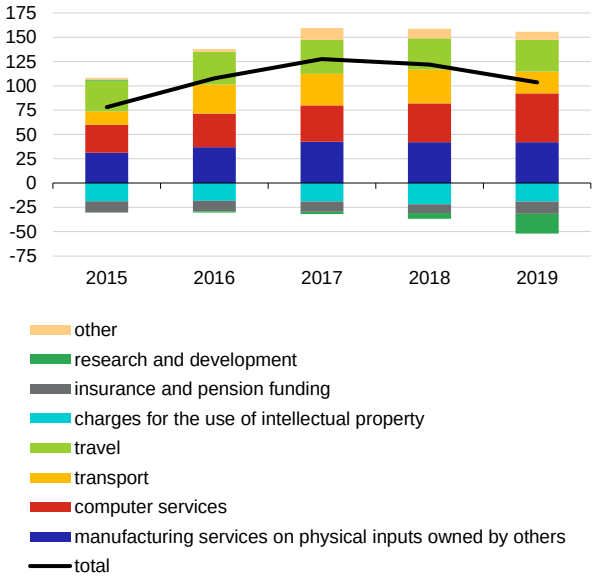
9 In 2019, the surplus in the category of motor vehicles was more than three times higher than the overall surplus on international trade in goods.

10 In 2018, this ratio had been 15%.

The total surplus was mainly attributable to a surplus in computer services (exceeding CZK 50 billion) and a surplus on manufacturing services[11] (amounting to CZK 42 billion). Travel and transport also recorded major surpluses. Conversely, the largest deficits were recorded for research and development (over CZK 20 billion) and for charges for the use of intellectual property (Chart 7). The year on year decline in the total surplus was linked mainly with a fall in the deficit on research and development (of more than CZK 14 billion) and a lower surplus on transport.

Chart 7: Services

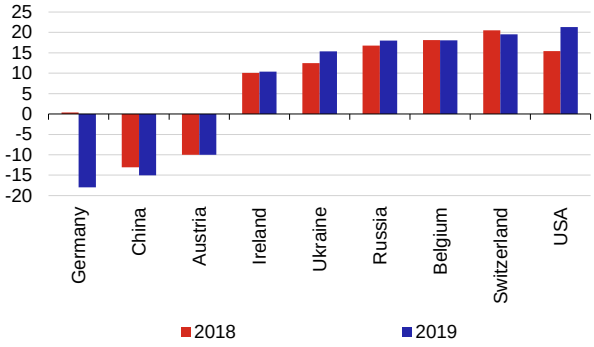
(CZK billions)



Source: CNB, CNB calculations

Chart 8: Services trade with the largest partners by surplus/deficit

(CZK billions)



Source: CNB

Turning to the territorial structure, the total services surplus was mainly attributable to the surplus on trade with EU non-members. The largest trade surpluses were recorded with the USA (CZK 21.3 billion), Switzerland (CZK 19.6 billion), Belgium and Russia. On the other hand, the largest deficits were recorded for trade with Germany (CZK -18 billion) and China (CZK -15 billion; see Chart 8). The year on year decline in the total surplus was also largely due to a decline in the balance with Germany (more than CZK 18 billion), which switched from a slight surplus to a sizeable deficit.

Despite having a relatively lower weight than goods, services have long been an important item, especially as regards their contribution to the overall current account balance. The surplus is predominantly due to four industries: manufacturing services, computer services, travel and transport. Compared to goods, services are exported to a greater extent outside the EU countries (non-EU countries account for about one-third of total credits); the share of non-EU countries is even more pronounced in terms of building surpluses. Moreover, the proportion of domestic owners in building surpluses is significantly higher than in the case of goods. Greater industry and territorial diversification of the services surplus than in the goods surplus and a higher proportion of domestic owners thus to some extent reduce the risk of changes in the external environment for the Czech Republic.

—

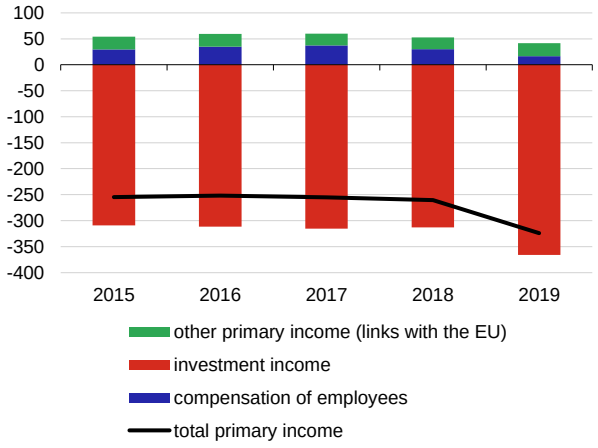
11 i.e. services associated with the processing of goods

II.2 PRIMARY INCOME

Primary income reached a record deficit in 2019, which was due mainly to a greater decline in investment income (see Chart 9). The total deficit amounted to CZK 324.1 billion and, as in previous years, was due mainly to direct investment income. Above all, continued relatively favourable economic developments in services in the Czech Republic were reflected in non-residents' direct investment income, especially in the outflow of dividends abroad. The increase in the total deficit (up by almost CZK 64 billion) was due mainly to sharp growth in direct investment income (reinvested earnings) of foreign investors in the Czech Republic, growth in compensation of foreign employees, whose number rose further due to the exhaustion of the Czech labour market, and growth in portfolio investment (debt securities) income of non-residents, associated with an increase in the CNB's interest rates. Primary income credits, but mainly debits, rose again after having decreased the previous year. Credits increased by almost 10%, while debits went up by more than 17%. However, a revision to primary income, which will be published next March, may significantly affect the growth in credits and debits as well as the total deficit, due mainly to the revision of direct investment income based on the CNB's regular annual survey of foreign direct investment in the Czech Republic.

Chart 9: Primary income

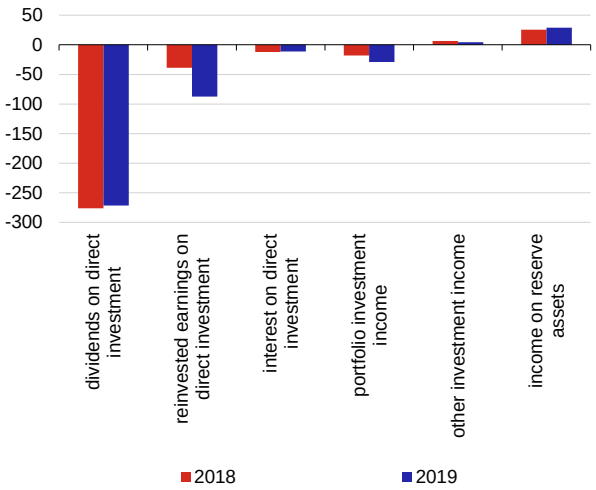
(CZK billions)



Source: CNB

Chart 10: Component balances under investment income

(CZK billions)



Source: CNB

The component deficit on direct investment income traditionally exceeded the level of the total deficit on primary income. It reached over CZK 370 billion, representing a year-on-year deepening of almost CZK 43 billion. The net outflow of dividends (almost CZK -272 billion) was again the largest part of direct investment income, being almost entirely associated with the outflow of dividends abroad. In terms of sector structure, the total outflow of dividends was due mainly to services, especially financial and insurance activities. By territory, dividends paid on direct investment were largely channelled to the EU(28) region (more than 94%), especially the Netherlands, Luxembourg and Germany (see Table 1). While the dividend deficit recorded a slight annual decrease, the deficit on reinvested earnings (of more than CZK 87 billion) deepened by more than CZK 48 billion due to robust reinvestment growth in the Czech Republic. These developments, based on preliminary data, seem to reflect a persisting attractiveness of some economic activities in the Czech Republic associated with real investment and reinvested funds from extraordinary income from transactions made in the given year. Income on interest, the third component balance under direct investment income also ended in a slight deficit (see Chart 10).

Table 1: Structure of FDI dividend outflows in the Czech Republic in 2019

(%)

SECTORAL BREAKDOWN		TERRITORIAL BREAKDOWN	
Total	**100.0**	**Total**	**100.0**
Manufacturing total	**40.1**	**EU(28) total**	**94.2**
motor vehicles (excl. motorcycles), trailers and semi-trailers	17.2	Netherlands	20.5
oil, chemical, pharmaceutical, rubber and plastic products	6.7	Luxembourg	20.1
Services total	**54.6**	Germany	15.6
financial and insurance activities	29.8	Austria	12.5
wholesale and retail trade; repairs of motor vehicles	9.4	France	5.8
information and communication services	8.7	Belgium	5.7

Source: CNB, CNB calculations

As regards investment income, a deficit was also recorded by portfolio investment income, while income on other investment and on reserve assets recorded surpluses. The portfolio investment income deficit exceeded CZK 29 billion, having increased annually by CZK 11 billion. It was due mainly to interest on debt securities and dividends on equity securities paid to foreign investors. The deeper deficit was due mainly to annually higher interest on bonds paid to non-residents. Income on other investment ended in a small surplus (of over CZK 4 billion). Income on reserve assets also recorded a fairly large surplus (of almost CZK 29 billion).

As usual, the total primary income deficit was partly moderated by a surplus on compensation of employees and a surplus on other primary income. The surplus on compensation of employees, comprising mainly wages, amounted almost to CZK 17 billion, having decreased by more than CZK 13 billion due to fast growth in debits. Debits channelled to Slovakia and Ukraine rose the most (both by CZK 5 billion). At the same time, Ukraine had the highest share in total spending (almost 43%)[12]. Conversely, the surplus on other primary income, including relations to the EU budget, was similar as in previous years (CZK 25.1 billion), having increased only slightly.

The primary income balance is affected primarily by a long-running high share of foreign ownership in the domestic economy. The direct investment income deficit is thus a key item of primary income. But it has long been partly moderated by surpluses on compensation of employees[13] and transfers from the EU.

II.3 SECONDARY INCOME

The secondary income balance recorded a deficit for the fourth consecutive year, which deepened slightly compared to the previous year. The secondary income deficit reached CZK 40.6 billion, representing a year-on-year increase of almost CZK 1 billion (see Chart 11). Amid double-digit growth in total credits and total debits, the overall deficit and the balance structure remained broadly unchanged from the previous year.

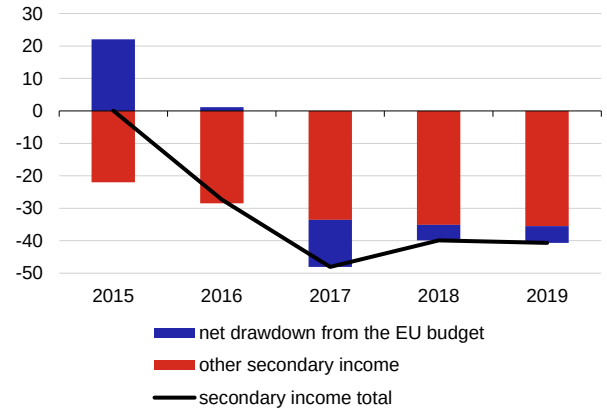
—

12 Germany recorded the highest share of compensation of employees in credits (almost 56 %).

13 However, these surpluses have recently declined due to the tight Czech labour market.

Chart 11: Secondary income

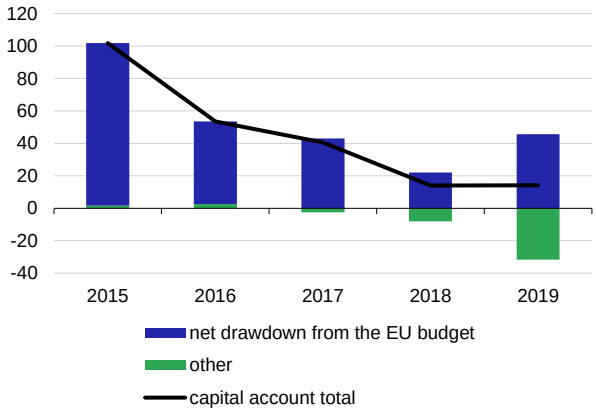
(CZK billions)



Source: CNB, CNB calculations

Chart 12: Capital account

(CZK billions)



Source: CNB, CNB calculations

Net drawdown of income from the EU budget, reported under secondary income, recorded again a deficit, which had increased marginally. Total income from the EU (reported under current international cooperation) increased slightly but at the same time debits picked up slightly (especially the EU's own VAT- and GNI-based resources). As it did a year earlier, the net position of income from the EU thus recorded a small deficit (of over CZK 5 billion; see Table 2).

The overall secondary income deficit was mainly attributable to a deficit on income not connected with the EU budget, related mainly to income of other (non-government) sectors. It totalled almost CZK 36 billion, having increased very slightly from a year earlier. It was due mainly to a deficit recorded for social contributions, which exceeded CZK 10 billion.

Table 2: Czech Republic's transfers with the EU in 2019

(CZK billions)

	2019			difference 2019–2018		
Name	credits	debits	balance	credits	debits	balance
Other primary income	**32.4**	**7.4**	**25.1**	**3.0**	**0.5**	**2.5**
Taxes on production and on imports	0.0	7.4	-7.4	0.0	0.5	-0.5
Subsidies on production	0.5	0.0	0.5	0.2	0.0	0.2
Other subsidies on production	32.0	0.0	32.0	2.8	0.0	2.8
Secondary income	**40.9**	**46.0**	**-5.1**	**1.7**	**2.1**	**-0.3**
Current international cooperation	40.9	2.0	38.9	1.7	0.8	1.0
EU's own VAT- and GNI-based resources	0.0	44.0	-44.0	0.0	1.3	-1.3
Capital transfers	**45.8**	**0.0**	**45.7**	**23.7**	**0.0**	**23.7**
Investment subsidies	45.8	0.0	45.7	23.7	0.0	23.7
TOTAL	**119.1**	**53.5**	**65.7**	**28.5**	**2.6**	**25.8**

Source: CNB, CNB calculations

The secondary income balance is affected primarily by a gradually increasing deficit on private transfers and fluctuations in financial relationships between the Czech Republic and the EU (fluctuations in credits amid slightly increasing payments).

III. CAPITAL ACCOUNT

As in the previous year, the capital account was mostly affected by drawdown of funds from the EU budget and emission allowance trading. The capital account surplus amounted to CZK 14.1 billion, recording only a slight annual increase (see Chart 12). However, with the overall surplus remaining flat, both relevant components showed sizeable increases. Total credits and debits also showed very fast growth.

Turning to the overall balance, a surplus (or credits) on funds from the EU budget remained the largest item. It amounted to CZK 45.7 billion, which represented a renewed increase in investment grants after a year of subdued net drawdown (to approximately double the level in the previous year, i.e. up by almost CZK 24 billion).

The role of the non-produced non-financial assets item associated mainly with emission allowance trading has increased significantly within the capital account over the last two years. The increasing importance of emission allowance trading was reflected both in growing trade turnover and the increasing balance. The component balance of non-produced non-financial assets recorded a deficit of almost CZK 33 billion in 2019, which had more than tripled year on year, offsetting thus the favourable impact of higher net drawdown of EU funds.

The capital account balance is affected predominantly by income from the EU. Some one-off operations are also recorded on the capital account, such as the write-off of external debt or the payment ensuing from the international arbitrage decision in the past. The quite extensive activities related to emission allowance trading have been significant recently.

IV. FINANCIAL ACCOUNT

The financial account recorded a slight net outflow of capital of CZK 32.8 billion last year (see Chart 13), which is around 0.6% of GDP (see Chart 14). This was due mainly to growth in the CNB's reserve assets and a net outflow of capital under other investment. The total net outflow of capital was moderated by a net inflow of capital under direct and portfolio investment.

Chart 13: Financial account

(CZK billions)

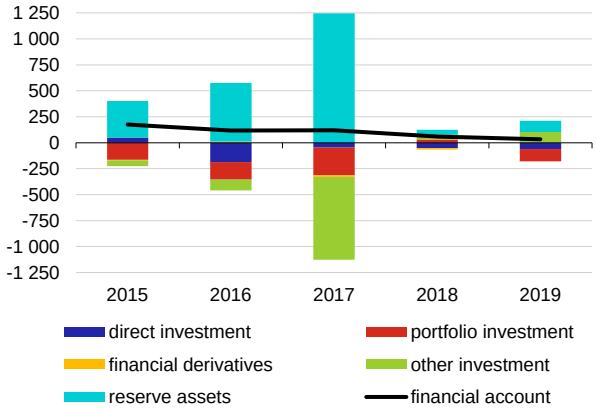
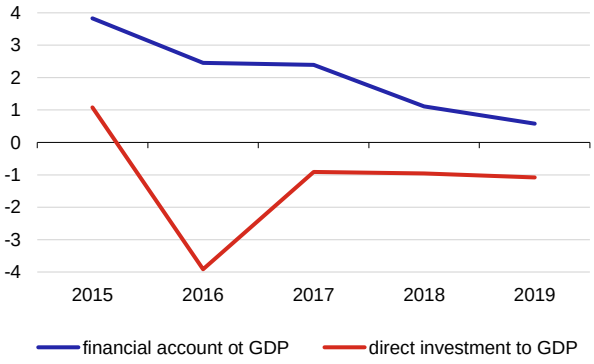


Chart 14: Ratios of financial account and direct investment to GDP

(%)



Note: A positive result represent a net outflow, a negative result a net inflow, or their ratio to GDP.

Source: CNB, CZSO, CNB calculations

IV.1 DIRECT INVESTMENT

The net inflow of capital to the Czech Republic continued under direct investment. It was associated solely with reinvested earnings reflecting previously realised, significantly higher investment by non-residents in the Czech Republic than by residents abroad.[14] The net inflow amounted to CZK 61.0 billion, being thus lower than the estimated balance of reinvested earnings[15] (CZK 87.3 billion[16]). Adjusted for reinvested earnings, a slight net outflow of capital abroad prevailed within direct investment in 2019 (see Chart 15).

Reinvested earnings accounted for almost 85% of total investment on the side of the capital inflow to the Czech Republic (CZK 213.6 billion; see Chart 16). The inflow of other (debt) capital amounted only to around 4% of the inflow. Investment in equity capital in the Czech Republic (CZK 25.0 billion) accounted for around 12% of total direct investment by non-residents in the Czech Republic.

The role of reinvested earnings in the outflow of direct investment abroad (CZK 152.7) was not as dominant as in the inflow. But it was by far the largest item, accounting for 60% of the total outflow of capital. Investment in equity capital amounted to almost 20% of total investment by residents abroad. Loans provided under direct investment accounted for the remaining more than 20% of total investment.

—

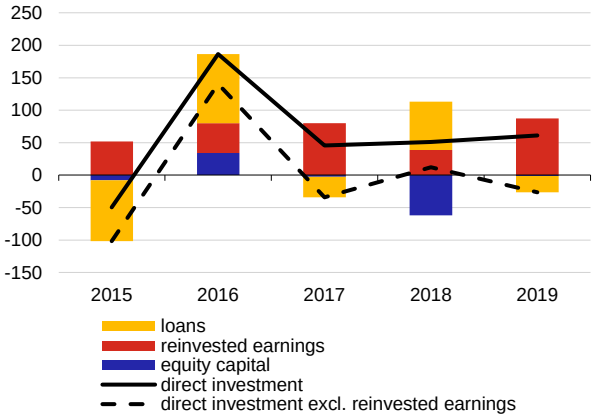
14 The value of investment by non-residents in the Czech Republic was almost three times the size of investment by residents abroad at the end of 2018.

15 They reflect the difference between the generated profit and dividends paid.

16 The definitive figure for 2019 based on statistical statements will be available in March 2021.

Chart 15: Direct investment balance structure

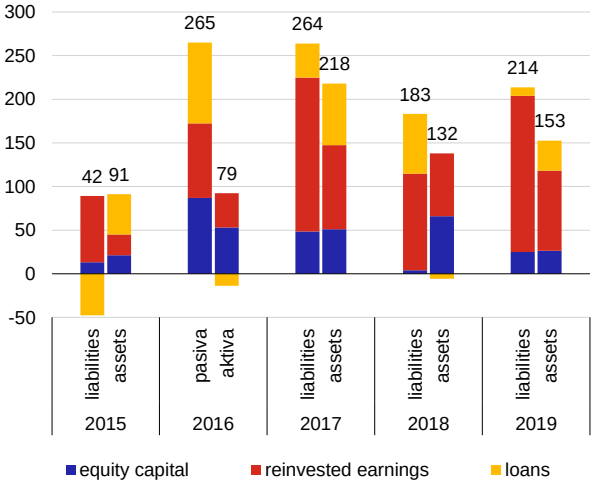
(CZK billions)



Source: CNB, CNB calculations

Chart 16: Direct investment structure

(in CZK billions)

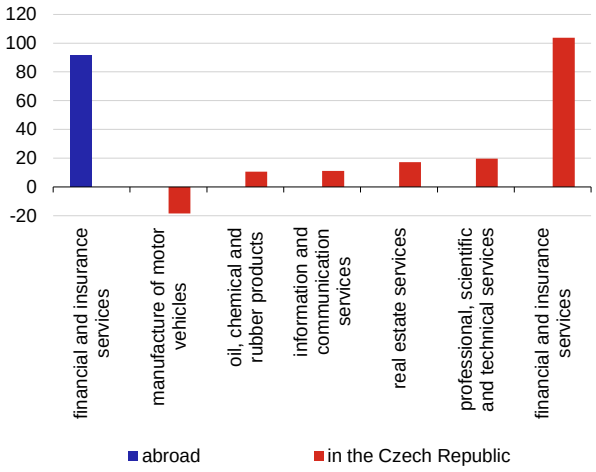


Source: CNB, CNB calculations

As regards the sector structure of direct investment (see Chart 17), more than 95% on the inflow side was investment in services (especially finance and insurance). Financial and insurance services accounted for about 60% of the total inflow of capital. About two-thirds of this were reinvested earnings, the rest was investment in equity capital. About 12% of total investment was property investment and around 10% was investment in professional, scientific and technical activities. Thus, it cannot be said that the inflow of capital fostered the necessary structural changes in the Czech economy. Direct investment by residents abroad was also channelled mainly to services (almost 85%), especially finance and insurance (more than 80% of all direct investment by residents), with around 10% being investment in manufacturing (especially food production and manufacture of machinery and equipment).

Chart 17: The largest direct investment flows by sector in 2019

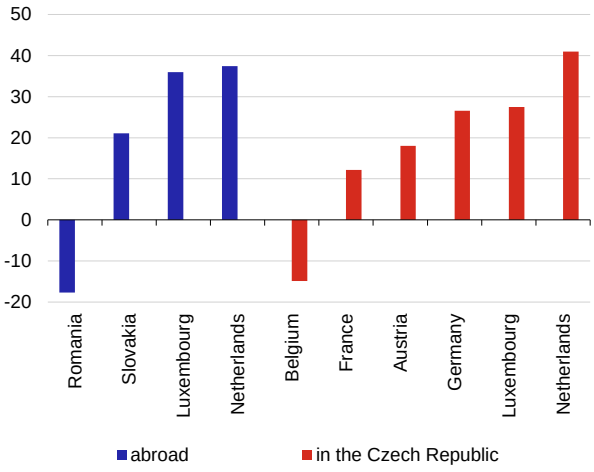
(directional principle; NACE classification; CZK billions)



Source: CNB, CNB calculations

Chart 18: The largest direct investment flows by country in 2019

(directional principle; immediate investor principle; CZK billions)



Source: CNB, CNB calculations

By territory, as in previous years, EU countries were predominant; both on the inflow side (accounting for more than 80%), and on the outflow side (more than 90%). In 2019, most direct investment (by country of the immediate investor) was channelled to the Czech Republic from the

Netherlands, Luxembourg, Germany and Austria (totalling almost 65%). Czech investment abroad went to the Netherlands, Luxembourg and Slovakia (almost 85% in total), with the Netherlands and Luxembourg playing the role of "tax havens".

The developments in the direct investment balance in individual years are due to the volumes of direct investment realised in the past by non-residents in the Czech Republic and by residents abroad. The ensuing reinvested earnings account for the bulk of today's investment flows. But they are not true cross-border capital flows. The inflow of new foreign direct investment to the Czech Republic has been constrained mainly by the reduction in the maximum value of investment incentives below the level in the other V4 countries in recent years. The more limited labour force availability and slightly higher wages compared to the other V4 countries, which usually compete with the Czech Republic for investment, also play a role. The total net direct investment inflow has also been affected by fairly significantly increasing financial strength of domestic investors in recent years, which is reflected in the growing volume of acquisitions abroad and also in purchases of domestic firms from non-residents. These factors will limit the net inflow of direct investment in future.

IV.2 PORTFOLIO INVESTMENT

Within portfolio investment, a high net inflow of capital totalling CZK 117.6 billion was recorded in 2019. This was due mainly to purchases of domestic bonds by non-residents and, to a much lesser extent, a decrease in residents' holdings of foreign debt assets. Debt capital flows were affected chiefly by the interest rate differential between the key currencies and the Czech koruna, which moreover increased further during last year. Equity security flows were virtually negligible, on the part of residents abroad as well as non-residents in the Czech Republic; in both cases, a marginal decrease in holdings was recorded. This reflected visible uncertainty of portfolio investors regarding future economic developments.

The asset side showed a gradual retreat from residents' holdings of foreign securities, with a net inflow of capital into the Czech Republic amounting to CZK 17.1 billion. While the volume of foreign bonds held by residents continued to decline (by around CZK 15 billion), the trend in residents' holdings of foreign equity can be regarded as stagnation from the economic point of view. The ongoing reduction of foreign bond holdings was largely connected with the high interest rate differential of the koruna against the euro, or more precisely its further increase, which was making euro-denominated bond holdings much less attractive to residents. From a sectoral perspective, a decline in the banking sector outweighed the other sectors. Holdings of foreign equity securities by residents fell by around CZK 2 billion (see Chart 19). As regards individual sectors, the disinvestment in the area of foreign equity securities was due to other sectors (the business sector).

The liabilities side (which recorded a net inflow of capital totalling CZK 100.6 billion) was dominated by higher growth in non-residents' holdings of domestic bank and, above all, corporate bonds. This growth totalled almost CZK 80 billion. It was mainly due to an increase in the volume of residents' foreign currency issues held by non-residents (corporate and bank bonds), usually long-term ones in the corporate sector and short-term ones in the banking sector. The relatively high volumes of foreign currency bonds are probably due to the significantly lower funding costs compared with the domestic currency or to an effort to obtain funds for new acquisitions abroad. The government sector recorded a slight increase in non-residents' holdings of koruna-denominated bonds, with very mixed developments observed over the course of the year. In the first half of the year, the volume of government bonds held by non-residents rose apace, but it declined in the second half of the year and the decrease in Q4 can be labelled as rapid. However, this was probably due to the maturities of the

individual bonds and their availability rather than an intention on the part of non-residents. Overall, non-residents' holdings of koruna government bonds picked up by about CZK 20 billion in 2019.

Chart 19: Portfolio investment balance structure

(CZK billions)

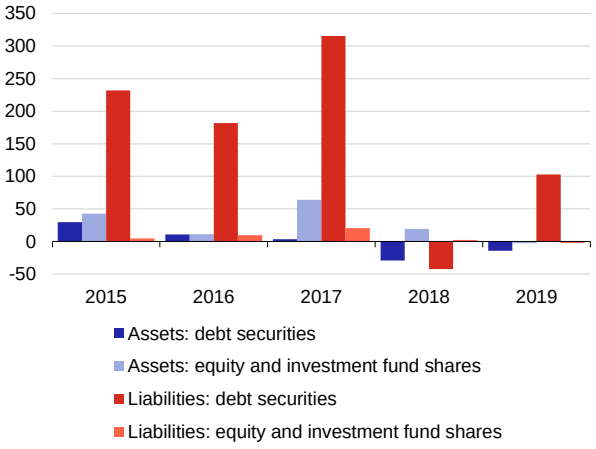
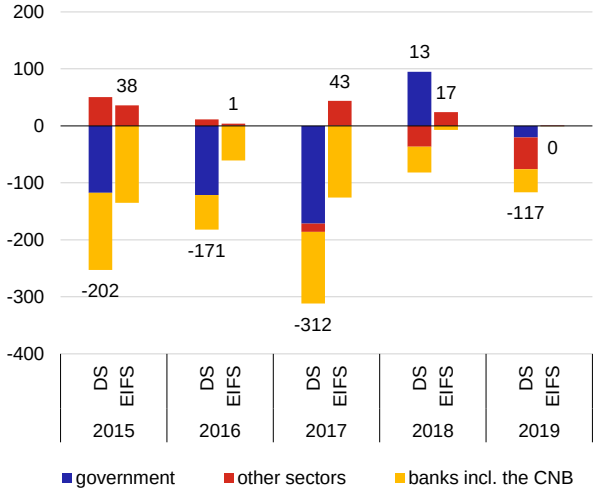


Chart 20: Portfolio investment balance by sector

(CZK billions)



Note: DS – debt securities, EIFS – equity and investment fund shares (equity securities). Positive values represent a net outflow, negative values represent a net inflow.

Source: CNB, CNB calculations

The evolution of **debt capital** flows is affected on the asset side mainly by the interest rate differential of the koruna against the euro. On the liabilities side, given the high share of foreign short-term capital placed in domestic koruna government bonds, the interest rate differential of the koruna against the dollar is also important. The flows of capital placed in **equity securities** are significantly dampened on the liabilities side by the very limited offer of liquid domestic issues. Investor activity on both the asset and liabilities side was curbed last year by gradually increasing uncertainty regarding the future course of the global economy.

IV.3 FINANCIAL DERIVATIVES

Transactions related to settlement of financial derivatives trading led to a net outflow of capital from the Czech Republic totalling CZK 1 billion in 2019. By the standards of this item, this was a relatively significant year-on-year change. Moreover, a net outflow of capital, albeit a negligible one, is unusual for this item.[17]

IV.4 OTHER INVESTMENT

A net outflow of other investment amounting to CZK 102.1 billion was linked mainly with a decrease in the volume of non-residents' deposits with commercial banks. A moderate net outflow of capital was recorded for the government sector and the central bank as well. Overall, a net inflow of CZK 28.3 billion was recorded on the asset side and an outflow of CZK 130.4 billion on the liabilities side.

—

17 In recent years it occurred only once (in 2016).

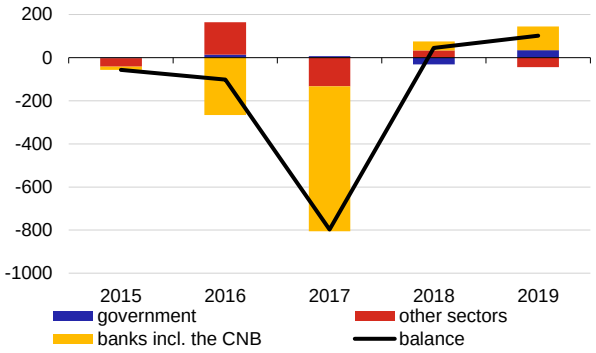
The **government sector** saw a relatively large net outflow of capital abroad, to the tune of CZK 34.6 billion. The outflow was connected with repayments of short-term, and to a lesser extent also long-term, loans from abroad.[18]

The **central bank** recorded a slight net outflow of CZK 9.5 billion.

Overall, the **other sectors** borrowed funds from abroad totalling CZK 43.3 billion. This predominantly involved net drawdown of trade credits. The rest (roughly 10%) was associated with the acceptance of long-term financial loans from abroad.

Chart 21: Other investment balance by sector

(CZK billions)

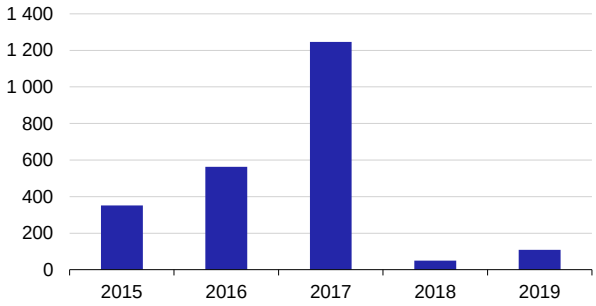


Note: Positive (negative) values represent a net outflow (inflow).

Source: CNB, CNB calculations

Chart 22: Change in reserve assets

(CZK billions)



Source: CNB, CNB calculations

The **banking sector** saw a net capital outflow of CZK 101.4 billion, which was due chiefly to changes in deposits involving above all a decline in non-residents' deposits, especially short-term ones, with domestic banks. The change concerned mainly foreign currency transactions, whereas the decrease in non-residents' koruna deposits was a negligible CZK 6 billion. No major changes were recorded for loans; a smaller decrease in loans of CZK 8 billion was recorded only on the asset side.

Most transactions within other investment in 2019 can be regarded as technical (trade credits), cost-optimising (replacement of a loan with a government bond, some bank operations, long-term corporate loans) or based on the decision of a foreign counterparty (outflow from the CNB, decline in bank deposits).

IV.5 RESERVE ASSETS

Growth in reserve assets reached a relatively buoyant CZK 108.3 billion, of which 60% reflected the Czech Republic's surplus vis-à-vis the EU and the rest was income on reserve assets (see Chart 22). Both items increase the CNB's international reserves. In the case of income from the EU, this is so on the basis of an earlier agreement between the Czech government and the CNB aiming to

18 The loans repaid were partly replaced by the aforementioned increase in non-residents' holdings of koruna bonds (within portfolio investment).

prevent an impact on the supply of, and demand for, foreign currency and, in turn, the exchange rate of the koruna.[19]

The increase in reserve assets owing to operations with the EU is based on the agreement between the Czech government and the CNB aiming to prevent an impact on the koruna exchange rate due to temporary net income from the EU. The marked fluctuations in the extent of the outflow are connected with the highly uneven drawdown of funds (cumulating at the end of the individual periods). In the new seven-year programme, net drawdown of EU funds is expected to fall markedly to around CZK 20 billion a year on average.[20] Income on the CNB's international reserves is an additional source of growth in reserve assets. This income reflects above all changes in interest rates on the reserve currencies relative to their share in the CNB's reserves (EUR, USD, CAD, AUD, SEK, JPY, GBP) and dividend income from equity holdings.

19 Leaving this income on the market would generate appreciation pressures on the koruna, possibly pushing it above the level reflecting the competitiveness of the Czech economy. In the past, these operations were used e.g. to eliminate government income from sales of state property to non-residents. As regards the balance on operations vis-à-vis the EU, this in fact involves a temporary subsidy to the Czech economy, which is less developed than the EU average, by the richer EU countries. As a result of the real convergence of the Czech economy, these subsidies are going down gradually over time and will come to a complete halt in the future.

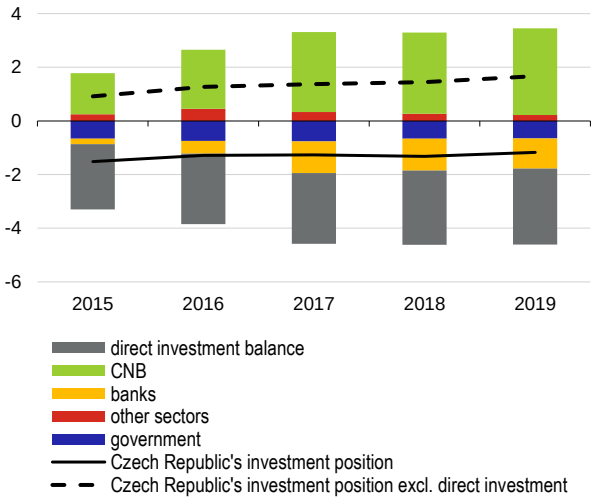
20 Owing to a decline in the volume of subsidies (due to the exit of the United Kingdom, a net payer, from the EU) and a rise in Czech contributions (due to the convergence of the Czech GDP with the EU average).

V. THE INVESTMENT POSITION OF THE CZECH REPUBLIC[21]

The Czech Republic's investment position stood at CZK -1,168.4 billion, i.e. -20.7% of GDP, as of 31 December 2019 (see Chart 23 and 24).[22] The negative investment position is due solely to the Czech Republic's high debt in the area of direct investment, which is generally regarded as much less risky than debt connected with the use of debt instruments. Adjusted for the effect of direct investment, the Czech Republic has a significant net creditor position totalling CZK 1.6 trillion.

Chart 23: Czech Republic's investment position and breakdown by debtor

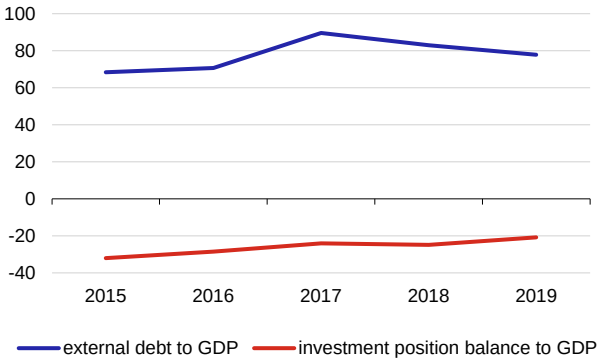
(CZK trillions; end of period balance)



Source: CNB, CNB calculations

Chart 24: External debt and investment position relative to GDP

(% of GDP)



Source: CNB, CNB calculations

The change in the investment position in 2019 can be regarded as a relatively significant decrease in debt. Unlike in the previous years, however, it was due exclusively to one-off effects (asset revaluation and exchange rate movements). In contrast to the previous years, the Czech economy did not generate virtually any surplus. The relatively swift elimination of the surplus[23] was associated with rapid growth in domestic demand amid a significant slowdown in external demand; however, the predominant cause (roughly 70%) lay in specific effects related to EU environmental policy (emission permits, contributions of domestic firms to foreign parent companies for measures to cut emissions) and impacts related to growth in domestic interest rates (growth in dividends in the financial sector[24] paid out to foreign parent companies and indirectly also higher expenditure related to the financing of the government's koruna debt and transferred abroad). Thus, the decrease in the debtor position in 2019 was due chiefly to asset revaluation (around 60%) and the rest was due to exchange

—

21 In addition to a yearly view of the external balance of the Czech Republic, it is also useful from the point of view of longer-term risks to look at the Czech Republic's investment position. The investment position reflects the total value of residents' financial assets in the form of receivables from non-residents and the value of residents' liabilities to non-residents as of a given date. The difference between the values of these assets and liabilities is the country's net international (investment) position. Besides reflecting all past financial flows between residents and non-residents, it covers exchange rate effects and effects linked with other changes in assets and liabilities reflecting changes in their value over time (revaluation).

22 For the purposes of MIP assessment, values of up to -35% of GDP are considered safe.

23 which had still exceeded CZK 120 billion in 2017

24 predominantly owned by non-residents in the Czech case

rate effects (depreciation of the koruna against some currencies[25]). Besides the overall change, shifts in the partial positions were also recorded, which were – with the exception of the aforementioned effects[26] – at the expense of the other partial positions. As a result, three positions improved (the CNB, banks and to a small extent the government) and two deteriorated (direct investment and other sectors).

As regards the partial investment positions, the debtor position on direct investment increased by almost CZK 70 billion (to CZK 2.83 trillion) in 2019. This was due to an inflow of direct investment into the Czech Republic.[27] The markedly negative partial position on direct investment is mainly a result of the massive direct investment inflow from abroad between 1998 and 2008 and the related value of reinvested earnings in the subsequent years. Therefore, the volume of non-residents' investment in the Czech Republic is almost three times the volume of residents' investment abroad. Owing to its weight, this partial position is the cause of the overall negative investment position of the Czech Republic.

Besides direct investment, the creditor position of other sectors declined in 2019, down by more than CZK 50 billion (to CZK 0.27 trillion). By comparison with the peaks observed in 2018 Q1, however, the cumulative creditor position of other sectors fell by almost CZK 200 billion. This was due to increased interest of residents in issuing foreign currency bonds (usually in euro) or accepting loans that were priced much more favourably than koruna loans due to the high interest rate differential, and lower interest in holding foreign currency assets (mostly debt ones). Basically, this was connected mainly with the effect of the interest rate differential between the koruna and other currencies, especially the euro.

The debtor position of the banking sector decreased slightly (by around CZK 60 billion) but remains high at CZK 1.13 trillion. Within the overall position, foreign currency liabilities to non-residents declined. By contrast, short-term koruna deposits of non-residents with domestic banks were almost unchanged (down by a modest CZK 6 billion). The relatively large negative international position of the banking sector is not primarily due to a need for external financing of the Czech Republic's external deficit, but it reflects the different phases of the business and monetary cycle and the different monetary different settings in the Czech Republic and in the euro area. The negative position increased predominantly during the exchange rate commitment period and two-thirds of it are the aforementioned koruna deposits of non-residents with domestic banks (created largely by the foreign parent companies of domestic banks and by their affiliates).

The government also recorded a very modest decrease in its net debtor position (down by around CZK 6 billion to CZK 0.65 trillion). Non-residents' holdings of government debt increased relatively rapidly during the year, falling slightly below last year's level in Q4 owing to a sharp drop. This drop pertained mainly to short-term, and to a lesser extent also long-term, foreign currency loans.

The most important change in the partial investment positions in 2019 was a rise in the CNB's creditor position (up by almost CZK 200 billion). The real improvement in the position represented more than one-half of that amount. It involved income on the international reserves and net operations vis-à-vis the EU. The remaining part of the improvement was due to asset revaluation and exchange rate gains. The CNB's creditor position was a sizeable CZK 3.23 trillion at the end of 2019.

—

25 USD, CAD, GBP and JPY, with a different currency composition of assets (almost exclusively foreign currency) and liabilities (predominantly koruna)

26 exchange rate effects and revaluation of assets and liabilities

27 In reality, this was due solely to higher reinvested earnings of non-residents in the Czech Republic than those of residents abroad. Actual capital flows recorded a very slight outflow of funds.

In recent years, economic developments have led to a gradual decrease in the room for a real decline in the Czech Republic's overall international debtor position. Exchange rate effects and revaluation of assets and liabilities have thus become the main factors underlying its changes. A similar trend can probably also be expected in the future.

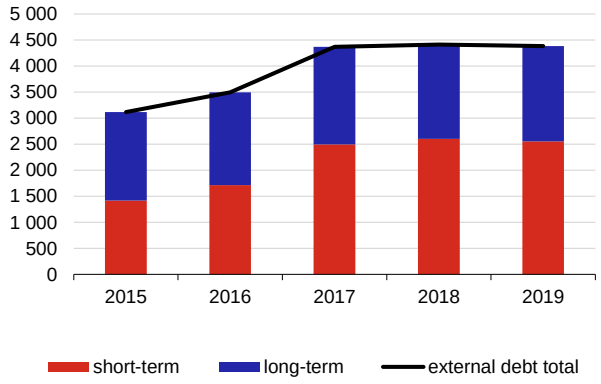
VI. EXTERNAL DEBT OF THE CZECH REPUBLIC

At the end of 2019, the Czech Republic's gross external debt was CZK 4.38 trillion, or 77.8% of GDP (see Chart 24). It was almost unchanged from the end of 2018 (down by CZK 29 billion). Short-term debt accounted for 58% of total debt, falling very modestly (by CZK 49 billion) compared with 2018. By contrast, long-term debt rose marginally. The financial sector was the biggest contributor to the total debt (accounting for over 40%), but it managed to somewhat reduce its debt during 2019 (by almost CZK 90 billion to CZK 1.77 trillion). Government debt and CNB debt also declined marginally last year (by more than CZK 10 billion to CZK 0.69 trillion and by CZK 8 billion to 0.18 trillion, respectively). Conversely, the debt of other sectors picked up somewhat (by almost CZK 80 billion to CZK 1.76 trillion). Thus, it accounted for about 40% of the total debt.

However, it must be taken into account that gross external debt is not the ideal indicator for more advanced economies with significant involvement in international division of labour. High debt may only reflect a high degree of involvement. Furthermore, one should bear in mind that besides payables there are also receivables, including the important factor of their structure and availability. In the Czech case, the CNB's international reserves alone covered more than 77% of all external debt liabilities of all domestic entities as of 31 December 2019. The banking and business sectors also have sizeable assets. In the Czech Republic, moreover, the current level of gross debt is significantly affected by the massive inflow of foreign capital during the exchange rate commitment period (especially in 2016 and 2017). The CNB purchased these funds in its reserves, where they still remain.

Chart 255: External debt

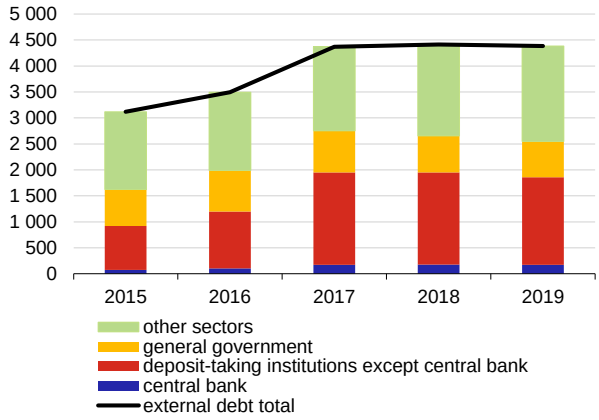
(CZK billions; end of period balance)



Source: CNB, CNB calculations

Chart 266: External debt by debtor

(CZK billions, end of period balance)



Source: CNB, CNB calculations

VII. THEMATIC ANALYSES

VII.1 THE BALANCE OF PAYMENTS AND ITS IMPORTANCE FOR A CENTRAL BANK[28]

This article aims to present in a simplified form the sophisticated structure of the balance of payments, emphasising its close relationship with a central bank's macroeconomic policy. Furthermore, its goal is to point out the links between the evolution of the balance of payments and its sibling statement of the international investment position, as well as its relationship with a country's external debt, including public budget performance.

The balance of payments has been compiled for more than 700 years! As is generally known, it is a statistical statement recording all financial transactions between economic agents in one country (residents) and the rest of the world (non-residents). In economic terminology, the term balance of payments stabilised as late as the 18th century thanks to J. Steuart.[29] The beginnings of the balance of payments date back to early mercantilism and 1355 (IMF, 2002), when the first records of England's exports and imports started to be compiled to obtain a picture of the balance of its trade relationships (i.e. only the trade balance, to use today's terminology, was compiled). At that time, only goods trade was included. As trade relationships between countries developed and deepened, the balance of payments was expanded gradually to include additional economic and accounting aggregates, evolving into the form that we know today: the current account, the capital account and the financial account (see Table VII.1.1).

The balance of payments must always be balanced from the accounting point of view. The fact that economists often speak of the partial balances of the balance of payments is due to their focus on the examined phenomenon reflected in its specific part (account). The balance of payments is based on the principle of double entry, i.e. every transaction is entered twice: once as a credit item and once as a debit item. If we add the "errors and omissions" item to the individual balances, the entire balance of payments is in balance from the accounting point of view. The balance of payments may be compiled and analysed from the time, commodity, territorial or currency perspective.

The balance of payments differs from other balances in that it records flows over a given period of time. This makes it different from other balances, including the central bank balance sheet, which are compiled to record stocks as of a given date. However, the stock perspective is very important and can be found in a statement called the international investment position. The balance of payments thus enables a view of the economy in terms of international financial and money flows and is therefore a very important source of information, e.g. with regard to the structure of GDP.

Table VII.1.1. Simplified form of the balance of payments (BPM6)

Current account (CA) • **Goods and services** • **Primary income** • **Secondary income**	The current account records flows of goods (exports and imports) and services (credits and debits), exports and imports of income on invested capital (interest, dividends, reinvested earnings) and labour (wages), and non-capital unrequited transfers (economic aid, gifts, inheritance, alimony, pensions etc.). It also includes an EU Member State's links with the EU budget.

28 Author: Luboš Komárek. The views presented here are those of the author and do not necessarily reflect the official position of the CNB. The author would like to thank Oxana Babecká, Jan Brůha, Petr Král, Rudolf Olšovský (all CNB) and Martin Mandel (University of Economics in Prague) for their valuable comments and suggestions.

29 James Steuart "*An Inquiry into the Principles of Political Economy*". According to the IMF (2002), D. Ricardo also used the term "balance of payments", but he was alone in using it.

Capital account (CapA)	The capital account captures capital transfers related to migration, debt forgiveness, ownership rights to fixed assets (investment grants) and transfers of non-produced non-financial tangible assets (land) and intangible rights (patents, licenses, copyrights). It also includes drawdown of EU funds and debt forgiveness.
Financial account (FA) • **Direct investment** • **Portfolio investment** • **Financial derivatives** • **Other investment** • **Reserve assets**	The financial account captures information on financial (capital) flows. It records transactions connected with the creation, liquidation and change in ownership of the financial assets and liabilities of the government, the banking and corporate sectors and other entities vis-à-vis the rest of the world. Direct investment (investment in registered capital and other capital) provides information e.g. on imports and exports of foreign direct investment representing an equity stake in a company's registered capital of at least 10%. Portfolio (indirect) investment reflects financial flows of an equity and debt nature, covering equity stakes which do not meet the condition for inclusion in foreign direct investment as well as the purchase and sale of corporate and government bonds. Financial derivatives and other investment cover credit from suppliers and banks, loans, deposits and capital subscriptions to international non-monetary organisations etc. They are broken down by time into long-term and short-term ones and by main economic sector (the central bank, commercial banks, the government and other sectors). The financial account also includes reserve assets (international reserves). Reserve assets are readily available external assets controlled by monetary authorities. The reserves serve as a source of direct funding of payment imbalances or for indirect regulation of the size of such imbalances via foreign exchange market interventions aiming to influence the exchange rate or to achieve other goals.
Errors and omissions	A balancing item between the balances of the current, capital and financial accounts. Its non-zero size may be due e.g. to a time shift between exports and the repayment of export receivables (movements in the national currency's exchange rate) and the imperfection of statistical sources used to compile the balance of payments.

For comparability across countries and over time, the balance of payments and the international investment position are compiled on the basis of the same methodology. The modern (standardised) form of the balance of payments was introduced in 1948, when the International Monetary Fund published its first *Balance of Payments Manual*. Its sixth edition (BPM6)[30] has been in use since 2009, when it replaced the previous version introduced in 1993.[31]

The balance of payments is also closely linked with the international investment position and external debt.[32] The international investment position, i.e. the final balance between financial assets and liabilities, paints a picture of the whole-economy stock balance, i.e. the net financial relationship vis-à-vis non-residents. The structure of the investment position is the same as that of the financial account of the balance of payments. The links between the balance of payments accounts and the international investment position are direct. The sum of the current and capital account balances taking into account the "errors and omissions" item must equal the financial account balance and, in turn, the final balance

30 See IMF (2013a) for an updated version.

31 Olšovský (2014) provides a detailed explanation of the differences between BPM6 and BPM5.

32 See IMF (2013b).

of the investment position. Therefore, $Investment\ position_{(t+1)} = Balance\ CA + CapA_{(for\ period\ t\ to\ t+1)} + + Investment\ position_{(t)}$.[33] The structure of the investment position also provides a picture of the asset position (what residents own) and the debt position (what residents owe) of the domestic economy vis-à-vis the rest of the world.

The links between the current account of the balance of payments and the public (government) budgets involve an important macroeconomic perspective. The difference between private savings and investment (S - I) and the difference between government tax revenues and government expenditure (T - G) equals net exports: $(S - I) + (T - G) = NX$. It follows from this identity that if private investment and savings remain constant, the goods and services balance deteriorates if government expenditure rises or government revenues fall.[34] Likewise, if the domestic economy – e.g. owing to undercapitalisation – needs sizeable investment that cannot be covered by domestic private or public resources, net exports are inevitably negative.[35] This was the case for the converging economies of Central Europe in the 1990s. If the investment is productive, the economy will generate export surpluses in the future and the current account will turn positive, which indeed eventually happened in central Europe. In the opposite case, there is a danger of imbalances and crises, which was visible e.g. in the Asian crisis of the 1990s.[36]

An analysis of the dynamics of the current and financial accounts is a part of the creation of the macroeconomic stabilisation policies of the central bank and the government. An analysis of the two "main" balance of payments accounts may signal external imbalances in advance.[37] Under certain circumstances, such imbalances may be a source of fundamental pressures affecting the exchange rate and may, in an extreme case, prompt the central bank to intervene[38] on the foreign exchange market. Changes in the balance of payments due to changes in the central bank's international reserves directly affect the exchange rate. A broad balance between the individual balance of payments accounts is positive news not only for the central bank and the government, but also for rating agencies, investors and financial managers. The latter may derive e.g. information about the size (capacity) of the market from the balance of payments. If a country has been recording sizeable deficits on the goods and services balance for a longer time, it probably does not have further room for growth in imports from abroad. High and persisting current account deficits, or more generally imbalances between the individual balance of payments accounts, indicate previous structurally uneven economic growth with potential adverse impacts on future developments.

—

33 See e.g. Mandel and Durčáková (2016), and Marková (2017).

34 For the sake of simplicity, we assume that the economy is close to its potential.

35 A current account deficit may be financed by foreign capital, enabling external balance to be maintained provided that capital mobility is high. It was the verification of capital mobility that lay the foundation for the formulation of the Feldstein-Horioka puzzle, which may be only apparent in the opinion of the author of this box.

36 See e.g. Corsetti et al. (1999).

37 The author believes that over time, i.e. as the financial linkages between countries increase, the exchange rate-forming information stemming from the evolution of the financial account is being put on an equal footing with that from the current account (the traditional economic view).

38 Interventions of this type must be distinguished from the common practice of some central banks stemming from the monetary policy regime – or rather exchange rate regime – they apply (currency peg, currency board, ERM-II participation). In such cases, interventions are a common part of the foreign exchange market and therefore do not point to a fundamental problem in the economy.

References

Corsetti, G.; Pesenti, P.; Roubini, N. (1999): What caused the Asian currency and financial crisis? Japan and the World Economy, Elsevier, vol. 11(3), pp. 305–373, October.

Feldstein, M.; Horioka, C. (1980): Domestic Saving and International Flows. Economic Journal 90(358): 314–329.

IMF (2002): The Use of Balance of Payments Statistics in the Determination of Monetary and Fiscal Policy. Fifteenth Meeting of the IMF Committee on Balance of Payments Statistics, Canberra, Australia, October 21–25, 2002, BOPCOM-02/51.

IMF (2009): Balance of Payments Manual. International Monetary Fund. https://www.imf.org/external/np/sta/bop/BOPman.pdf

IMF (2013a): Sixth Edition of the IMF's Balance of Payments and International Investment Position Manual (BPM6). https://www.imf.org/external/pubs/ft/bop/2007/bopman6.htm

IMF (2013b): External Debt Statistics: Guide for Compilers and Users. International Monetary Fund. https://www.imf.org/external/pubs/ft/eds/Eng/Guide/index.htm

Mandel, M.; Durčáková, J. (2016): Mezinárodní finance a devizový trh. Management Press.

Marková, J. (2017): Vnější rovnováha z pohledu investiční pozice vůči zahraničí. Český finanční a účetní časopis, 2017, vol. 12, no. 1, pp. 17–40.

Olšovský, R. (2014): Zavedení nového manuálu platební bilance ČR, Mezinárodní standard statistiky platební bilance Mezinárodního měnového fondu (BPM6).

VII.2 CYCLICALLY ADJUSTED CURRENT ACCOUNT[39]

The current account is an important indicator of external sustainability and its substantial fluctuations may signal increased probability of macroeconomic or financial crises. In addition to long-term factors, the current account is also influenced by cyclical effects which may conceal some long-term trends. In this article, we propose an approach based on an economic model decomposing the items of the current account into long-term trends, cyclical factors and one-off volatility. This allows the current account to be adjusted for one-off and cyclical factors. We refer to the adjusted current account as a cyclically adjusted current account. The presented econometric model can also be used to prepare economic scenarios and predictions of current account items.

The current account is an important indicator of external sustainability

Many macroeconomic and financial crises are often preceded by current account imbalances.[40]. These crises are usually accompanied by sharp fluctuations in the current account, especially in countries whose current account balances have long been in deficit. Such changes in the current account can be achieved either through redirection of expenditure or through a sharp fall in domestic demand, i.e. private and public consumption and investment. A sharp drop in consumption has negative impacts on consumers' welfare and on social cohesion, while a decline in investment may undermine future economic growth.[41]

For this reason, the issue of current account sustainability is addressed by monetary and fiscal authorities, international institutions as well as private companies. The European Commission, for example, uses the three-year average of the current account to GDP ratio as one of the indicators included in the *Macroeconomic Imbalance Procedure*.[42] In its *External Sector Report*, the IMF regularly assesses the past trend and the future outlook for current accounts, drawing attention to possible risks of external imbalances. The central banks of open economies also regularly analyse the current account, as it reflects important macroeconomic links, including exchange rate forming information. Similarly, the current account is analysed in detail by the Ministry of Finance. Private institutions such as rating agencies likewise pay close attention to the current account and its dynamics.

The current account is affected by various factors acting over various time scales, with long-term factors affecting trends being particularly relevant for external imbalance. Demographic structure can serve as a typical example of a long-term factor, as a higher proportion of persons of retirement age implies, ceteris paribus, lower domestic savings and deficit pressures on the current account. Long-term high general government debt also implies a current account deficit where other domestic economic agents are unable to finance public budget deficits. These long-term factors are

39 Authors: Oxana Babecká Kucharčuková and Jan Brůha. The views expressed in this article are those of the authors and do not necessarily reflect the official position of the Czech National Bank.

40 E.g.: Ca'Zorzi et al. (2012) and Lane and Milesi-Ferretti (2012) convincingly document the existence of current account imbalances in the lead-up to the global financial crisis. Davis et al. (2014) confirm that current account imbalances are a predictor of financial crises in both developed and developing economies.

41 The latter – less favourable – scenario is unfortunately more common. It is carefully documented by Lane and Milesi-Ferretti (2012) on the example of European countries.

42 The Macroeconomic Imbalance Procedure is an analytical tool used by the European Commission to assess the risks of imbalances in EU Member States. More details can be found at: https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/macroeconomic-imbalance-procedure_en

country-specific and the resulting current account trend depends on the interaction between institutions, economic policy settings and the overall economic story of a country.[43]

Other factors influence the current account at business cycle frequencies. The domestic and foreign business cycle, which affects exports and imports of goods and services, is a classic example of a major cyclical factor.[44] Business cycles are also influenced by movement of labour between countries (the Czech Republic, for example, is a major labour importer, especially in favourable phases of the business cycle); inflow and outflow of capital may likewise depend on the cyclical position of economies (outflows of dividends will be more attractive when investment owners' countries are not performing well).

Finally, the current account dynamics also contain high-frequency movements. These movements can arise from one-off transactions (such as one-off transfers between countries) or may reflect measurement errors, historical data revisions and other non-systematic items. As such, they do not propagate to subsequent periods, and thus have no longer-term effects.

Each economic variable affecting the current account can do so at all three frequencies. Long-term appreciation of the exchange rate, for example, implies long-term competitiveness of an economy. At cyclical frequencies, the exchange rate in open economies acts as an automatic stabiliser, as its depreciation in the downward phase of the business cycle reduces negative demand-pull pressures. Finally, non-fundamental exchange rate volatility may affect both capital and trade flows in the short term and thus contribute to high-frequency changes in the current account. Public finance deficits likewise consist of a trend, a cyclical and a one-off component. All these components are reflected in the current account at different horizons. The breakdown of variables affecting the current account into short-term and long-term ones sometimes given in the literature is therefore artificial and misleading to a large extent.

Cyclically adjusted current account model

One-off and cyclical movements may temporarily overshadow the effects of long-term trends, which can make the interpretation of observed data more difficult. This raises the natural question whether these different components can be separated in a rigorous manner. The cyclically adjusted current account model represents such an instrument for separating the components.

A recent paper in the field of econometric modelling shows how the relevant model can be constructed and estimated effectively. Andrle and Brůha (2018) presented a general framework for trend-cycle models, which can model the relations between the trend, cyclical and high-frequency components of the observed time series separately. In this they extend the literature which points out that both strength and direction of the economic relationships between variables may differ depending on the time horizon (Engle, 1974). From the technical perspective, the model presented by Andrle and Brůha (2018) uses a method of econometric models of time series with unobserved components (Harvey, 1989).

—

43 Babecká Kucharčuková and Brůha (2019) document that, unlike for advanced economies, the convergence process has been the dominant long-term driver of the current account for the transforming Central European economies, including the Czech Republic. The current accounts were negative at the start of the transformation, as these economies were highly undercapitalised, and the low capitalisation led to investments being imported. Goods produced in these economies were initially uncompetitive, further widening the net export deficit. As time went on, the situation began to change. Capitalisation, total factor productivity and goods quality all increased. As documented by Brůha and Podpiera (2011), this process not only fostered a rise in total exports, but also improved the terms of trade and shifted the entire current account towards positive levels.

44 Babecká Kucharčuková and Brůha (2018) document a high income elasticity of foreign trade. Although this elasticity might have decreased a little recently, it remains higher than 1.

Each component of the current account is captured separately in the empirical model, but all components are simultaneously determined. The long-term component of the current account is captured using a flexible trend model (Harvey and Jaeger, 1993), which can be used to model a wide range of dynamics. The cyclical part is captured using a linear vector autoregression (VAR) model that links the cyclical components of the current account to the cyclical components of the exogenous variables. The empirical model also contains a high-frequency part, modelling short-term current account movements that cannot be explained by the long-term trend or by the position of the economy in the cycle. The important thing is that these components – trend, cyclical and high-frequency – are not identified a priori using a univariate statistical filter but are derived in a model-consistent manner using the Kalman filter (Harvey, 1989),[45] which means that the estimates of these components are simultaneously linked. The cyclically adjusted current account is taken to be an estimated long-term component.

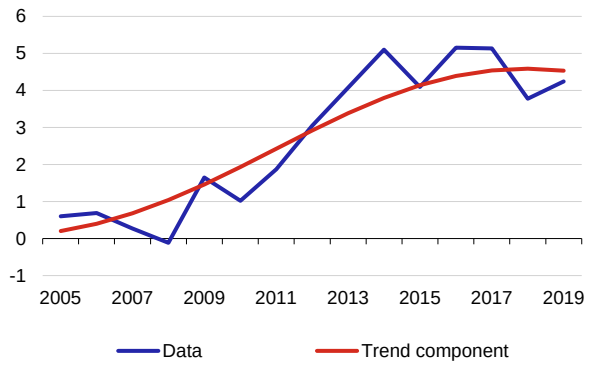
In addition to estimating the cyclically adjusted current account, the resulting empirical model can also be used as an instrument to model the forecast for current account components. The cyclical components of the current account can be forecasted based on assumptions regarding the cyclical dynamics of both domestic and foreign economy. The trend components can be forecasted using observed trends or, still better, satellite approaches, which incorporate expert knowledge of the economy under review. Where there are expectations of one-off effects or specific transactions, they can also be worked into the model framework in a consistent manner.

The results for the Czech economy

We applied the above model of a cyclically adjusted current account to the Czech economy using data from 2004 to 2019. The cyclical components of the current account are linked to the cyclical components of domestic and foreign variables using a vector autoregression model. The major domestic variables used to identify the cycle include retail sales, domestic absorption components (investment in particular) and unemployment. As for foreign variables, the cycle is identified by euro area exports and imports, industrial orders in Germany and IFO indicators.

Chart VII.2.1: Goods balance trend component

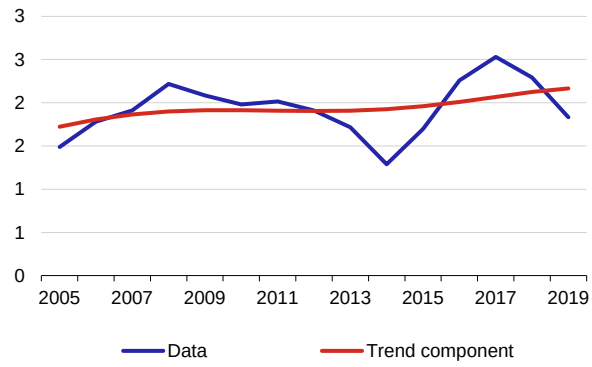
(percentage points; ratio to GDP)



Source: authors' calculations

Chart VII.2.2: Services balance trend component

(percentage points; ratio to GDP)



Source: authors' calculations

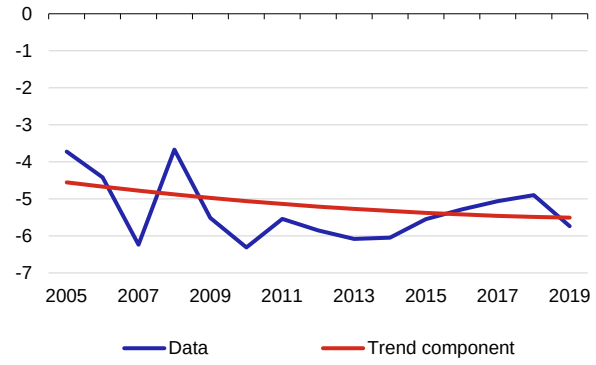
45 Another advantage of using the Kalman filter to estimate the long-term, cyclical and high-frequency components is that it allows expert judgement to be incorporated very easily. If, for example, there is an expert opinion that some part of the current account is a one-off factor, this information can be introduced fairly easily into the model filtration by expanding the state space (Andrle and Brůha, 2018). It is thus relatively straightforward to combine the model approach and expert judgement.

The goods balances have been on an upward trend since the Czech Republic joined the EU. The trend component of the goods balance as viewed by the model was slightly negative in 2004 but started to rise to positive levels in 2005. This upward trend was the dominant driver of this item for most of the period under analysis, and can be explained by Czech firms' engagement in global production chains (Babecká Kucharčuková and Brůha, 2018). The growth trend has halted in recent years and the steady-state goods balance remains positive at around 4% of GDP. Conversely, cyclical factors, especially the cyclicality of external demand, are starting to play a greater role in the dynamics of the goods balance. On the other hand, the services balance has started to show an upward trend only recently. The steady-state services balance was almost constant at 2% of GDP from EU entry until 2015. In recent years, the model has been identifying a moderate upward trend to around 2.5%.

Cyclically adjusted primary income is slightly rising on both credit and debit sides, with the net primary income to GDP ratio being broadly constant at around -5%. Primary income is dominated by investment income, which also reflects a weak business cycle effect in addition to the above trend.

Chart VII.2.3: Primary income balance trend component

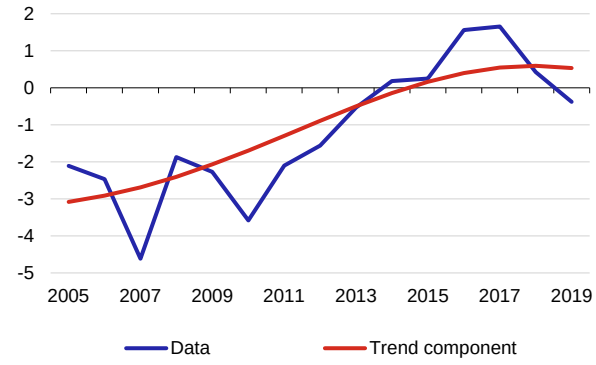
(percentage points; ratio to GDP)



Source: authors' calculations

Chart VII.2.4: Overall current account balance trend component

(percentage points; ratio to GDP)



Source: authors' calculations

The cyclically adjusted current account has been showing a surplus since 2015. This is also true of 2019 when the current account as a whole ended in a slight deficit due to a deficit in the last two quarters of 2019. This difference can be explained by a moderate slowdown in the economies of the main trading partners, which the model interprets as a cyclical phenomenon. In 2016 and 2017, by contrast, the current account levels were higher than the levels of the cyclically adjusted current account, reflecting the favourable effect of the foreign business cycle.

References

Andrle, M., Brůha, J. (2018). Forecasting and Policy Analysis with Trend-Cycle Bayesian VARs, IMF mimeo, available at https://michalandrle.weebly.com/uploads/1/3/9/2/13921270/tc_vars.pdf

Babecká Kucharčuková, O., Brůha J. (2018): International trade developments with a focus on the EU, CNB, Global Economic Outlook, 2018/10.

Babecká Kucharčuková, O., Brůha J. (2019): Current account modelling – long-term trends and cyclical factors, CNB, Global Economic Outlook, 2019/9.

Brůha, J., Podpiera, J. (2011): The dynamics of economic convergence: The role of alternative investment decisions, *Journal of Economic Dynamics and Control*, vol. 35(7), pp. 1032-1044.

Ca'Zorzi, M., Chudik A., Dieppe A. (2012): Thousands of Models, One Story: Current Account Imbalances in the Global Economy, European Central Bank Working Paper No. 1441.

Davis J.S., Mack, A., Phoa, W., Vandenabeele A. (2014): Credit Booms, Banking Crises, and the Current Account, Federal Reserve Bank of Dallas, Globalization and Monetary Policy Institute Working Paper No. 178.

Devadas, S., Loayza, N. (2018): When is a Current Account Deficit Bad? *Research & Policy Briefs* World Bank Group, No. 17, October 2018.

Engle, R.F. (1974): Band Spectrum Regression, *International Economic Review*, vol. 15 (1), pp. 1–ll.

Harvey, A.C. (1989): Forecasting, structural time series models and the Kalman filter, Cambridge University Press.

Harvey, A.C., Jaeger, A. (1993): Detrending, Stylized Facts and the Business Cycle, *Journal of Applied Econometrics*, 8 (3), pp. 231-47.

Lane, P., Milesi-Ferretti, G.M., (2012): External adjustment and the global crisis, *Journal of International Economics*, vol. 88(2), November 2012, pp. 252-265.

VII.3 INTERNATIONAL TRADE AND LONG-TERM ECONOMIC GROWTH[46]

The economic theory and empirical evidence show that the liberalisation of international trade fostered an increase in the long-term steady economic growth rate. If the current coronavirus pandemic caused a long-running reduction in international trade, it would mean not only a standard macroeconomic shock but also a decrease in the long-term economic growth rate in advanced economies. Based on the literature, we estimate that if international trade was reduced in the long term, each 10 per cent of the decrease would result in a decline in the long-term economic growth rate of 0.1–0.2 percentage point a year.

Based on modern models of endogenous economic growth, this article offers a quantification of the impact a long-lasting reduction in international trade would have on long-term economic growth in advanced economies. This impact on long-term growth is not contained in structural macro-economic models. When constructing disaster (or ultra-disaster) scenarios and forecasts in times of uncertainty, this effect should be taken into consideration beyond the scope of standard transmission mechanisms of structural models.

Short- and medium-term effects of the reduction in international trade have only a temporary effect on economic growth. These effects can be modelled using structural macro-economic models, especially DSGE models. Using these models, a reduction in trade is a negative supply shock which increases the prices of inputs to output and consumer goods, thereby decreasing productivity (because it is necessary to replace inputs with more expensive substitutes) and welfare (consumers have available a smaller selection of goods) and increasing inflation. These fundamental mechanisms then propagate into the rest of the economy, with the strength of the propagation depending on the expected duration of the shock, the exchange rate regime, monetary policy and the size of the respective economy. However, this type of shock does not change long-term economic growth rates, which are treated as exogenous in typical macro-economic models.

Nevertheless, theories of endogenous economic growth[47] show that a long-term reduction in international trade might also change long-term economic growth rates. Modern theories of economic growth have focused on long-term effects of international trade since the early 1990s in connection with increasing globalisation and a great liberalisation of global trade (Grossman and Helpman, 1991). Theoretical models and subsequent econometric studies indicate a positive and long-running significant effect of international trade on long-term economic growth. This would mean that if the current pandemic and the related measures led to permanent declines in trade, negative impacts on economic growth and welfare would be more dramatic than indicated by DSGE and other typical structural macro-economic models.

The first mechanism through which international trade fosters an increase in the rate of economic growth is based on increasing the amount of production inputs. Modern growth theories show that the amount of productive goods is not only a consequence of economic growth but also its source. An expansion of productive inputs namely acts as positive externality, which turns returns of scale of individual producers into constant returns on the aggregate level, whereby technological progress, and hence economic growth, is generated endogenously (this is a mechanism already contained in Romer, 1986). Trade liberalisation increases the amount of disposable productive inputs, which leads to faster economic progress (Alvarez et al. 2013). Trade liberalisation also makes foreign

—

46 Written by Volha Audzei, Jan Brůha and Ivan Sutóris. The views expressed in this article are those of the authors and do not necessarily reflect the official position of the Czech National Bank.

47 The theory of endogenous growth has been developed since the end of the 20th century, with Romer (1986) being deemed to be the groundbreaking work. A readable overview of economic growth theories, including the related aspects (such as the quality of institutions or international trade), can be found in the Acemoglu (2009) textbook.

productive inputs cheaper, which fosters further productivity growth (Estevadeordal and Taylor, 2013). Conversely, the reduction in trade reduces the amount of productive inputs, or increases their price, which leads to slower technological progress.

The selection of firms is another mechanism. Opening up to international trade means increased competition, which leads to a demise of less productive firms and the allocation of resources from less productive firms to the more productive ones. More productive firms grow faster, have an opportunity to export and are forced to innovate, which further increases long-term productivity.

Finally, international trade leads to a diffusion of technology and knowledge spill-overs. Domestic firms can learn from foreign firms which have entered the domestic market; these foreign firms are above-average productive since only thus can they overcome the entry barriers to the domestic market, meaning they have a greater store of knowledge, which may spill between the economies.

The above channels identified by the theoretical models are quantitatively significant! Although there is a consensus in literature that the above channels contribute qualitatively to higher long-term growth rates at least among advanced economies, it is necessary to verify how quantitatively significant they are. The answer may be provided by both carefully calibrated theoretical models and empirical studies. Carefully calibrated theoretical models imply that the liberalisations carried out in the 1990s increased steady economic growth by around 1 pp. These estimates are consistent with results of empirical studies, see the following table. As regards the calibrated models, we selected those that can be used to estimate the effects of partial liberalisation.[48] As regards the empirical studies, we included a representative study which uses a credible identification strategy to estimate the causal effect of international trade liberalisation on long-term economic growth.[49]

Table VII.3.1. Effect of international trade on long-term growth – overview of studies

Study	Type	Result
Ben-David and Loewi (1997)	calibrated model	Liberalisation similar to EEC trade liberalisation in the 1960s increases a steady growth rate by 0.5 pp in the long run
Lewera van den Berg (2003)	meta-analysis	An increase in exports of 1 pp is associated with a rise in economic growth of 0.2 pp
Estevadeordal and Taylor (2013)	calibrated model, empirical study	Trade liberalisation in the 1990s increased long-term growth in liberalising economies by 1 pp a year
Perla, Tonetti and Waugh (2015)	calibrated model	A reduction in trade costs of 10% leads to an increase in productivity growth of 0.2 pp
Honkapohja, Turunen-Reda Woodland (2016)	calibrated model	The existence of tariffs leads to a decline in growth of 0.5–1 pp
Impullitti and Licandro (2018)	calibrated model	The elimination of most global trade would lead

48 Some theoretical models address the impacts of a hypothetical change from full autarky to fully liberalised international trade. In reality, however, we typically observe only partial restrictions and their removal. It is therefore important to quantify partial liberalisation.

49 The relationship between international trade and economic growth is simultaneous. Reduced estimates of the relationship between trade and growth may thus not reflect the causal effect. This overview thus intentionally ignores the empirical studies, which disregard the potential bias due to simultaneous dependence in econometric estimates and do not discuss a convincing strategy to identify the causal effect.

Study	Type	Result
		to a decline in long-term growth of 0.4 pp
Irwin (2019)	meta-analysis	Trade liberalisation is followed by an increase in growth of 1–2.7 pp

Based on an overview of studies we estimate that a long-term decline in the volume of international trade of 10% would cause a decline in long-term GDP growth of 0.1–0.2 percentage point.[50] Should the "bleak" scenarios materialise, the coronavirus pandemic may reduce international trade through various mechanisms. This may be a long-term negative supply shock, which breaks up supply relationships in global production chains. Measures to prevent the spread may also have a negative effect, or some governments may be tempted to use these measures as "invisible" non-tariff barriers. Last but not least, long-running uncertainty may lead to prioritising domestic production over imports if international commercial transactions were perceived as risky. A combination of these effects would mean a negative long-term shock to a steady economic growth rate beyond standard mechanisms captured in DSGE models.

References

Acemoglu, D. (2009): Introduction to Modern Economic Growth. Pricenton University Press.

Alvarez, F., Francisco J., Buera, Robert E., Lucas, Jr. (2013): Idea Flows, Economic Growth, and Trade, NBER Working Paper series No.19667.

Estevadeordal A., Taylor, A. M. (2013): Is the Washington Consensus Dead? Growth, Openness, and the Great Liberalization, 1970s–2000s, *The Review of Economics and Statistics*, vol. 95(5), pp. 1669–1690.

Ben-David, D., Loewy, M. B. (1997): Free Trade, Growth, and Convergence, NBER Working Papers No. 6095.

Grossman, G., Helpman E. (1991): Innovation and Growth in the Global Economy. MIT Press.

Honkapohja S., Turunen-Red A. H., Woodland, A. D. (2016): Growth, expectations and tariffs, *Canadian Journal of Economics*, vol. 49(4), pp. 1441–1469, November.

Irwin D. A., (2019): Does Trade Reform Promote Economic Growth? A Review of Recent Evidence, NBER Working Paper series No. 25927.

Lewer J. J., Van den Berg, H. (2003): How Large Is International Trade's Effect on Economic Growth? *Journal of Economic Surveys*, vol. 17(3), pp. 363–396,

Perla J., Tonetti, Ch., Waugh, M. E. (2015): Equilibrium Technology Diffusion, Trade, and Growth, NBER Working Paper series No. 20881.

Romer P. (1986): Increasing Returns and Long-Run Growth, *Journal of Political Economy*, vol. 94 (5), pp. 1002–1037.

50 The impacts for each economy may differ depending on its existing trading volume and structure. It can be expected that the impacts of a partial reduction in transactions will be greater for a small open economy.

VIII.STATISTICAL ANNEX: THE BALANCE OF PAYMENTS IN 2015–2019

CZK billions	2015	2016	2017	2018	prel. 2019
A. Current account	11.3	74.2	83.5	22.6	-21.3
Goods	188.0	245.7	259.1	201.1	239.8
Exports	3153.2	3191.0	3402.1	3497.3	3574.8
Imports	2965.1	2945.3	3142.9	3296.2	3335.0
Services	78.0	107.6	127.7	122.0	103.7
Manufacturing and repair services	29.2	30.5	40.7	41.4	46.1
Transport	13.7	29.9	32.6	34.8	22.3
Travel	31.6	34.0	34.9	32.3	32.7
Other services	3.5	13.3	19.5	13.5	2.5
Total credits	561.8	592.7	635.2	661.9	691.1
Total debits	483.8	485.0	507.6	539.9	587.5
Primary income	-254.8	-251.8	-255.3	-260.6	-324.1
Compensation of employees	29.4	35.0	37.2	30.0	16.8
Investment income	-309.0	-311.4	-315.2	-313.2	-365.9
Other primary income	24.8	24.6	22.7	22.6	25.1
Total credits	180.8	202.9	271.3	258.4	283.8
Total debits	435.7	454.7	526.7	519.0	607.9
Secondary income	0.1	-27.3	-48.0	-39.9	-40.6
Credits	88.2	70.1	55.9	75.4	86.8
Debits	88.1	97.4	103.9	115.3	127.4
B. Capital account	101.9	53.5	40.6	14.0	14.1
Credits	104.9	54.9	62.2	62.4	106.4
Debits	3.0	1.4	21.6	48.3	92.2
C. Financial account	175.8	116.9	207.6	59.0	32.8
Direct investment	49.7	-186.5	41.3	-51.0	-61.0
of which: net reinvested earnings	-52	-46	-80.2	-38.9	-87.3
abroad	91.3	78.6	217.9	132.3	152.7
in the Czech Republic	41.6	265.2	176.6	183.3	213.7
Portfolio investment	-164.1	-169.5	-268.3	30.1	-117.6
Assets	72.2	21.9	67.4	-9.9	-17.0
Equity and IF shares (equity securities)	42.7	11.2	63.8	19.3	-2.8
Debt securities	29.5	10.8	3.6	-29.2	-14.2
Liabilities	236.4	191.5	335.7	-40.0	100.6
Equity and IF shares (equity securities)	4.5	9.7	20.3	2.3	-2.4
Debt securities	231.8	181.7	315.4	-42.3	103.0
Financial derivatives	-4.8	11.3	-14.2	-15.3	1.0
Other investment	-56.4	-101.9	-797.6	45.2	102.1
of which: government	-2.2	13.7	7.6	-30.6	34.6
corporations	-39.2	150.7	-133.3	34.2	-43.3
banks	8.7	-239.9	-575.4	41.6	110.8
Reserve assets	351.3	563.5	1246.4	50.0	108.3
D. Balance from current and capital account	113.2	127.7	124.0	36.6	-7.1
Balance from financial acc. (+ lending / - borrowing)	175.3	116.9	120.5	59.0	32.8
Errors and omissions	62.1	-10.8	-3.5	-22.4	-39.9

ABBREVIATIONS

AUD	Australian dollar
BPM6	Balance of Payments Manual, 6th edition
CAD	Canadian dollar
CapA	capital account
CA	current account
CNB	Czech National Bank
CZ	Czech Republic
CZ-CPA	classification of products
CZK	Czech koruna
CZSO	Czech Statistical Office
DI	direct investment
DSGE	dynamic stochastic general equilibrium
ECB	European Central Bank
EIB	European Investment Bank
ERM II	European Exchange Rate Mechanism
EU	European Union
EUR	euro
FA	financial account
FDI	foreign direct investment
GDP	gross domestic product
GNI	gross national income
GNP	gross national product
IF	investment fund
IFO	Leibniz Institute for Economic Research, University of Munich
IMF	International Monetary Fund
JPY	Japanese yen
MIP	Macroeconomic Imbalance Procedure
NACE	classification of economic activities
pp	percentage point(s)
prel.	preliminary outcome

SEK	Swedish krona
SITC	Standard International Trade Classification
USA	United States of America
USD	US dollar
V4	Czech Republic, Hungary, Poland and Slovakia
VAT	value added tax

GLOSSARY

This glossary explains some terms frequently used in the *Balance of Payments* publication. A more detailed glossary can be found on the CNB website (www.cnb.cz/en/general/glossary/index.html).

Balance of payments: Records economic transactions with other countries (i.e. between residents and non-residents) over a particular period. The basic structure of the balance of payments includes the current account, the capital and financial accounts and CNB international reserves.

Bond: A security giving the holder the right to a sum in repayment of principal at nominal value on the maturity date and to payment of yields on specified dates.

Capital account: Captures transfers related to migration, debt forgiveness, investment grants and transfers of intangible rights (e.g. licences, patents, copyrights, transactions in emission permits).

Current account: Records exports and imports of goods and services, income from capital, investment and labour and unrequited transfers.

Euro area: The territory of all Member States of the European Union that have adopted the euro as a single currency pursuant to the Treaty Establishing the European Community.

External debt: Captures the financial liabilities of residents vis-à-vis the rest of the world with stipulated maturity.

Financial account: Records transactions connected with the creation, liquidation and change in ownership of the financial assets and liabilities of the government, the banking and corporate sectors and other entities vis-à-vis the rest of the world. It consists of direct investment, portfolio investment, financial derivatives and employee stock options, other investment and reserve assets.

Financial assets: Economic assets for which an institutional unit may exercise its ownership rights and which comprise means of payment, financial receivables and other economic assets close to financial receivables by nature.

Foreign trade: Following the Czech Republic's accession to the European Union, its foreign trade is the sum of intra-union trade (i.e. trade with EU Member States) and trade with third countries. Foreign trade statistics are based on two systems of data collection: Intrastat monitors the movement of goods within the Community (arrival and dispatch of goods from/to EU Member States) and Extrastat monitors trade with EU non-members (imports and exports of goods from/to third countries).

Goods and services balance: The sum of the trade balance and the services balance.

Gross domestic product (GDP): The key indicator of economic development. It represents the sum of the value added by all economic sectors. In terms of use it consists of expenditure on final consumption (consumption of households, the government and non-profit institutions), gross capital formation (fixed investment and changes in inventories) and foreign trade (net exports of goods and services).

International investment position: Gives an overview of the stocks of all financial assets and liabilities of residents vis-à-vis the rest of the world as of a given date.

Primary income: An item on the current account of the balance of payments comprising income from labour, capital, financial resources provided and non-produced non-financial assets (wages and salaries, dividends, reinvested earnings, interest, rent as well as taxes and subsidies on production and on imports, which represent a part of the financial flows vis-à-vis the EU budget). In a more detailed breakdown, primary income consists of three balances: compensation of employees, investment income and other primary income.

Secondary income: An item on the current account of the balance of payments covering offsets to real and financial resources provided or acquired without a quid pro quo (subsidies and contributions vis-à-vis the EU budget and EU funds, pensions, foreign assistance, benefits, etc.)

Security: The holder's legal entitlement vis-à-vis the person bound by it. A security bears the legal entitlement it embodies and is basically irreplaceable for its origination, existence, transfer and termination. Securities may be issued in physical or book-entry form. In the Czech Republic, a security is not defined. The Act on Securities merely defines the system of securities, which comprises shares, interim certificates, unit certificates, bonds, investment coupons, coupons, option warrants, bills of exchange and promissory notes, cheques, bills of lading, warehouse certificates and agricultural warehouse certificates, as well as other securities declared as such by other laws.