Chapter 1: Reporting International Economic Relations – Selected Aspects

§ 2 International Economic Relations: Aggregate Accounting Systems

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International economic accounting systems are part of the macroeconomic national accounting system. On an aggregate basis, they show the economic relations of a country with foreign countries. More precisely, they report what has happened in the more or less distant past, i. e. they perform so-called expost analyses.

International economic relations comprise two aspects: transactions and claims. These are dealt with in two distinct international economic accounting systems, the balance of payments (BoP) and the international investment position (IIP).

The BoP registers the transactions between domestic residents and foreigners. As far as these transactions (flows) lead to external wealth, they are recorded as assets and liabilities (stocks) in the IIP. The IIP also takes into account changes of assets and liabilities that result from revaluations of existing stocks.

We will deal with the IIP in section 2.2. Before, we are now going to discuss the BoP.

2.1 International Economic Transactions: Balance of Payments

The Balance of Payments (BoP) is the result of the BoP statistics.

2.1.1 Basics

(1) Content

The BoP reports all economic transactions between residents of a certain geographical area, usually a country, and non-residents:

- The former are called the "domestic residents" while the latter are called "foreigners" or "non-domestic-residents". Domestic residents comprise natural persons domiciling in the reporting area as well as all other agents who mainly perform their economic activity there.
- Economic transactions comprise transactions in goods and services as well as asset transactions. Each can take the form of either an exchange or of a unilateral transfer; Feenstra/Taylor [(2012), p. 577] speak of "market transactions" and "non-market transactions", respectively.
- Transactions are flow variables or changes of stocks, i. e. they have the dimension "euro per period". Thus, the data recorded in the BoP always refer to a well-specified period of time.
- (2) Critique of the term "Balance of Payments"

The name BoP is misleading in two respects:

- "payments": the BoP records all transactions between domestic residents and foreigners, even if they do not include payments (example: barter trade)
- "balance": as mentioned before, the BoP registers flows; in contrast, a balance sheet shows stock variables

(3) Rules of bookkeeping

There are three principles of BoP accounting; see Krugman/Obstfeld/Melitz (2022), pp 363n; Feenstra/Taylor (2012), pp 577 n.

(a) Distinction between credits and debits

Transactions that, at least in principle, lead to an inflow of payment (receipt) are entered as credits. As an example, we take the export of a car: it is booked as a credit entry "export of goods" (EX_G). This holds not only if our foreign client actually pays for the car, but also if there is no inflow of payments (see the example below).

Transactions resulting – at least in principle – in a payment to foreigners are entered as debits.

(b) Double-entry bookkeeping

Every transaction enters the BoP twice, once as credit and once as a debit. When it comes to presenting the BoP in the form of an equation, credits are given a positive sign while debits get a negative sign.

If a transaction is an exchange (market transaction), it automatically leads to two offsetting entries. Example: sale of a car to an American client (credit entry) who pays on our account in New York (debit entry: purchase of the asset "claim on a foreign bank").

If however, the transaction is a unilateral transfer, the second entry is – in principle – missing. Example: we give a car as a gift to the Red Cross Organization in a poor country. In this case, the credit entry (export of a car) does not automatically lead to second entry! In order to keep up the principle of double-entry bookkeeping, we simply define a counter-entry "unilateral transfer, given" and book it as a debit. In the sequel, we keep in mind that the "transfer" accounts – there will be two of them – take <u>counter-</u>entries, i. e. we first enter a unilateral transfer in one of the "normal" parts of the BoP and only in a second step do we enter it in a "transfer" account.

An immediate consequence of the double-entry principle is that the BoP as a whole is always balanced: the sum of credit entries is necessarily equal to the sum of debit entries. (c) Classification in "accounts"

International transactions are classified in two broad groups. They define the two broad sub-balances ("accounts") of the BoP:

- Current account (CA): transactions in goods and services, including factor services
- Capital and financial account (KA + FA): asset transactions. Asset transactions are registered in the financial account (FA) if they constitute an exchange (market transaction); an example would be the sale of a share to a foreigner. If, however, they are a unilateral transfer, the counterentry is the capital account (CA); an example would be a heritage.

(4) Presenting the balance of payments

The bop can be represented in the following ways:

- account: this is helpful for didactic purposes; it also emphasizes the bookkeeping character of the bop statistics
- table: this is the way of presentation in official statistics
- equation: definitions from the bop are an important part of open-economy macroeconomic models.
- (a) The bop as an account

Exhibit 2.1.1 (3a) illustrates the bop as an account. The left side shows transactions that, at least in principle, lead to an inflow of payment (receipt); they are recorded as credits. Any transaction resulting – at least in principle – in a payment to foreigners is entered on the right side, i. e. as a debit.

As an example, we look at the export of a car to an American person: it is entered as a credit (EX_G) in the balance of foreign trade because, in principle, it leads (or: should lead) to an inflow of payment. The counter-entry depends on the character of the transaction:

- Exchange in the form of a sale: if our American client pays on our bank account in New York, the counter entry is a debit (CEX) in the financial account. The explanation for this is that the increase in our bank account must be viewed as the purchase of a foreign asset ("claim on a N. Y. bank"): as such, it would lead to an outflow of payment, leading to a debit entry.
- Exchange in the form of a barter trade: if we exchange our car against the American guy's motorbike, the counter-entry would be a debit IM_G in the balance of foreign trade.
- Unilateral transfer: if we give the car as a gift, the counter-entry is in one of the transfer accounts:
 - (i) If it is an asset transfer, it is a debit (KA_{giv}) in the capital account.
 - (ii) If it is an income transfer, it is a debit (CT_{giv}) in the balance of current transfers.

				Cumulated
Name	Credit	Debit:	Balanc	Balance
Account of Trade in Goods	Exports of goods (EX _G)	Imports of goods (IM _G)	TB_{G}	
Account of Trade in Services	Exports of services (EX _S)	Imports of services (IM _S)	ΤBs	ТВ
Account of Income Payments (Primary Income)	Export of factor services (EX _F)	Import of factor services (IM _F)	IB	TB + IB
Account of Current Unilateral Transfers (Secondary Income)	Current transfers received (CT _{rec})	Current transfers given (CT _{giv})	СТВ	CA
A. Current Account	Income received	Income used	СА	
B. Capital Account	Capital transfers received (KA _{rec})	Capital transfers given (KA _{giv})	КА	NL
	Net incurrence of commercial ("other") liabilities (CIM)	Net acquisition of commercial ("other") assets (CEX)	CFA	
	Net incurrence of reserve liabilities: USA only	Net acquisition of reserve assets (Δ ^{trans} OR)	OSB	(ВР)
C. Financial Account	Net-incurrence of foreign liabilities	Net acquisition of foreign assets	FA	0

TB = Balance on goods and services. IB = Balance on primary income. CTB = Balance on current transfers. CA = Balance on current account. KA = Balance on capital account. NL = net lending (if +) /net borrowing (if -). FA = Balance on financial account. CFA = Balance on nonreserve ("commercial") financial account. OSB = Official settlements balance

Exhibit 2.1.1 (3a): The Balance of Payments as an Account

As mentioned before, every international transaction enters the BoP twice, once as a credit and once as a debit. Thus, the two sides of the BoP are of equal "length": the BoP as a whole is always balanced (see the number 0 in the very last line of the column "cumulated balance").

The account form only shows data for one period. In order to overcome this inconvenience, in practice the BoP is presented in the form of a table.

(b) The BoP as a table

Sometimes, the items are in horizontal ordering while the periods are shown in the vertical head column. As an example, we take the BoP of the euro area as it was published by the European Central Bank (ECB) until 2023.

(EUR billions, u	inless other	wise indi	cated; net f	transaction	ns)									
		Cu	irrent acco	unt		Capital	Net Financial account					Errors and		
	Total	Goods	Services	Primary income	Second- ary income	account	borrowing to/from rest of the world (columns 1+6)	Total	Direct investment	Portfolio investment	Financial derivatives	Other investment	Reserve assets	omissions
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2020 2021 2022	183.2 284.6 -136.5	333.1 279.5 -84.8	-12.0 98.7 119.4	18.8 64.6 -10.2	-156.7 -158.2 -160.9	4.5 47.4 136.4	187.7 332.0 -0.1	180.5 312.1 13.9	-197.0 297.7 126.3	527.7 316.4 -277.6	18.5 68.3 62.8	-182.0 -500.4 84.6	13.2 130.1 17.9	-7.3 -19.9 14.0
2022 Q2 Q3 Q4	-53.6 -72.5 -2.1	-27.1 -55.8 4.4	45.0 21.7 24.1	-35.1 3.7 9.1	-36.4 -42.0 -39.6	104.4 3.6 20.3	50.9 -68.9 18.2	29.0 -52.8 47.3	111.2 -18.8 20.8	-40.4 -175.7 -14.9	28.8 43.9 -8.3	-73.0 90.4 40.6	2.3 7.4 9.1	-21.8 16.1 29.1
2022 Jan. Feb. Mar. Apr. July July Aug. Sep. Oct. Nov. Dec. 2023 Jan.	-10.5 -1.9 4.0 -17.7 -30.9 -4.9 -19.9 -31.1 -21.5 -19.9 1.0 16.8 -1.9	-11.0 2.2 2.5 -13.0 -6.6 -7.4 -14.7 -29.4 -11.7 -9.0 6.6 6.8 -6.7	10.4 7.1 11.0 13.6 14.3 17.1 12.1 7.8 1.9 6.5 7.5 10.2 10.4	5.3 5.4 1.5 -6.1 -2.9 5.2 1.4 -4.8 1.5 12.4 5.7	-15.3 -16.6 -11.0 -12.2 -13.1 -14.3 -14.7 -13.0 -12.5 -14.5 -12.6 -11.4	2.1 3.0 2.3 97.3 4.8 1.9 0.2 1.5 5.1 2.7 12.4 -1.6	-8.4 1.1 7.0 -15.4 66.4 -0.1 -18.0 -30.8 -20.1 -14.8 3.8 29.2 -3.5	9.9 4.4 -24.0 -43.8 41.3 31.5 6.6 -8.9 -50.5 16.8 -29.8 60.3 17.6	-17.3 26.2 4.1 3.2 113.8 -5.8 -13.2 -30.1 24.6 -1.6 2.9 19.5 -7.7	88.8 -24.2 -111.3 16.7 7.4 -64.4 37.1 -60.2 -152.6 -19.8 -54.2 59.2 6.8	3.7 -2.8 -2.5 27.5 1.5 -0.2 11.6 14.8 17.5 0.8 0.0 -9.1 9.3	-63.0 3.7 85.8 -90.5 -82.6 100.1 -30.5 -64.5 56.4 33.4 21.0 -13.8 17.8	-2.3 1.5 -0.1 -0.7 1.2 1.8 1.6 2.2 3.6 3.9 0.5 4.6 -8.6	18.3 3.4 -31.0 -28.4 -25.0 31.6 24.6 21.9 -30.4 31.6 -33.6 31.1 21.2
						12-mor	th cumulated	transactio	ns					
2022 Jan.	258.5	248.6	103.1	62.9	-156.1	47.3	305.8	291.6	224.3	392.5	58.4	-512.3	128.7	-14.1
2023 Jan.	-127.9	-80.5	119.4	-9.7	-157.0 12-month	132.7 cumulate	4.8 d transactions	21.7 as a perc	135.9 entage of G	-359.6 DP	68.4	165.4	11.6	16.9
2022 Jan.	2.1	2.0	0.8	0.5	-1.3	0.4	2.5	2.3	1.8	3.1	0.5	-4.1	1.0	-0.1
2023 Jan.	-1.0	-0.6	0.9	-0.1	-1.2	1.0	0.0	0.2	1.0	-2.7	0.5	1.2	0.1	0.1

Exhibit 2.1.1 (3b): The Balance of Payments of the Euro Area Source: European Central Bank (2023), p. 59. [Retrieved April 7, 2023]

We note from the above table that data are published for various lengths of periods: years, quarters, months.

Sometimes, the items are shown in vertical ordering while the periods are on the horizontal axis. As examples, we take the exposition of the German BoP as published by the Deutsche Bundesbank as well as the French BoP published by the Banque de France.

€ billion

Item	2022 ^r	2023 ^r	2024 ^r
I. Current account	+ 152.0	+ 232.8	+ 246.7
1. Goods	+ 133.2	+ 227.1	+ 235.5
Receipts	1,401.9	1,392.3	1,365.1
Expenditure	1,268.7	1,165.2	1,129.6
Memo item:			
Foreign trade ¹	+ 88.1	+ 217.7	+ 239.1
Exports	1,594.3	1,575.2	1,556.0
Imports	1,506.3	1,357.5	1,316.9
2. Services	- 32.0	- 63.4	- 74.0
of which:			
Travel	- 54.9	- 71.8	- 74.1
3. Primary income	+ 119.3	+ 136.8	+ 149.0
of which:			
Investment income	+ 119.2	+ 135.0	+ 143.5
4. Secondary income	- 68.4	- 67.7	- 63.8
II. Capital account	- 20.7	- 26.8	- 20.4
III. Financial account ²	+ 150.7	+ 195.4	+ 239.4
1. Direct investment	+ 60.9	+ 24.2	+ 30.3
2. Portfolio investment	+ 13.8	+ 2.2	+ 31.4
3. Financial derivatives ³	+ 44.6	+ 35.8	+ 42.0
4. Other investment ⁴	+ 26.9	+ 132.5	+ 137.1
5. Reserve assets	+ 4.4	+ 0.9	- 1.4
IV. Errors and omissions ⁵	+ 19.4	- 10.6	+ 13.1

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

Exhibit 2.1.1 (3c): Major Items of the German Balance of Payments Source: Deutsche Bundesbank (2025), p. 188. [Retrieved March 28, 2025]

Balance des palements – année 2023 (en millions d'euros)

		Crédits	Débits	Soldes
1.	COMPTE DE TRANSACTIONS COURANTES	1355869	1383979	- 28 110
1.1.	Biens	628 646	704791	- 76 145
1.1.1.	Marchandises générales	611012	704791	- 93 779
1.1.2.	Négoce	17634		17634
1.2.	Services	342 126	306 596	35 530
1.2.1.	Services de fabrication fournis sur des intrants physiques détenus par des tiers	14010	13091	920
1.2.2.	Services d'entretien et de réparation n.l.a	12 435	7483	4951
1.2.3.	Transports	58 573	57042	1532
	maritimes	24518	15954	8564
	aériens	12 517	14287	- 1770
	autres	21 538	26801	- 5 263
1.2.4.	Voyages	65 858	51768	14 0 9 0
1.2.5.	Services de construction	862	2492	- 1630
1.2.6.	Services d'assurance et de pension	17 148	15234	1914
1.2.7.	Services financiers	23 535	12284	11251
	Services explicitement facturés et autres services financiers	17940	10882	7058
	Services d'Intermédiation financière indirectement mesurés (SIFIM)	5 5 9 6	1402	4194
1.2.8.	Commissions pour usage de propriété intellectuelle n.i.a.	15 949	14995	954
1.2.9.	Services de télécommunication, d'informatique et d'information	25 974	31644	-5670
1.2.10.	Autres services aux entreprises	98632	93183	5449
	Services de recherche et développement	14 037	13568	470
	Services professionnels et services de conseil en gestion	35 609	34028	1581
	Services techniques, services liés au commerce et autres services	48 986	45588	3 399
1.2.11.	Services personnels, culturels et relatifs aux loisirs	7 4 2 5	7339	85
1.2.12.	Services des administrations publiques n.i.a.	1724	41	1683
1.3.	Revenus primaires	334 682	269829	64854
1.3.1.	Rémunérations des salariés	33810	2245	31565
1.3.2.	Revenus des Investissements	292 495	261513	30 982
	investissements directs	137717	60216	77 500
	Investissements de portefeuille	64 086	96736	- 32 650
	Autres Investissements	88 0 83	104560	- 16478
	Avoirs de réserve	2 609	0	2 609
1.3.3.	Autres revenus primaires	8377	6071	2 307
1.4.	Revenus secondaires	50415	102763	- 52 348
1.4.1.	Secteur des administrations publiques	11 157	44369	- 33 212
1.4.2.	Autres secteurs	39 258	58394	- 19 136
	dont transferts courants divers	5215	20602	- 15387
	dont envois de fonds des travailleurs	324	16100	- 15 776
2.	COMPTE DE CAPITAL	7756	667	7088
2.1.	Cessions d'actifs non financiers non produits	15	23	- 8
2.2.	Transferts en capital	7 741	644	7 0 9 7

Balance	des paiements – année 2023 (suite) (en millions d'euros)			
		Avoirs	Engagements	Net
3.	COMPTE FINANCIER	802730	838469	- 35739
3.1.	Investissements directs	67 150	39 105	28045
3.1.1.	Capital social	15443	25479	- 10036
3.1.2.	Bénéfices réinvestis	35100	18 600	16500
3.1.3.	Autres opérations (prêts intragroupe)	16607	- 4 974	21581
3.2.	Investissements de portefeuille	168 144	307 054	- 138910
3.2.1.	Actions et titres d'organismes de placement collectif (OPC)	4196	- 10 969	15165
	Banque de France	- 355		- 355
	Administrations publiques	889		889
	Institutions financières monétaires	10553	- 4 280	14834
	Autres secteurs	- 6891	- 6 688	- 203
3.2.2.	Titres de créance à long terme	146 683	264 170	- 117486
	Banque de France	12404	0	12404
	Administrations publiques	2561	133 352	- 130792
	Institutions financières monétaires	56294	96310	- 40017
	Autres secteurs	75425	34 507	40918
3.2.3.	Titres de créance à court terme	17264	53 853	- 36589
	Banque de France	- 3924	0	- 3924
	Administrations publiques	- 111	19002	- 19113
	Institutions financières monétaires	21849	35111	- 13263
	Autres secteurs	- 550	- 261	- 289
3.3.	Instruments financiers dérivés	327 490	344 143	- 16653
	Banque de France	0	0	0
	Administrations publiques	0	0	0
	Institutions financières monétaires	367876	363 084	4793
	Autres secteurs	- 40386	- 18941	- 21 445
3.4.	Autros investissements	260 000	148 166	111834
3.4.1.	Autres participations	193	0	193
	Banque de France	125	0	125
	Administrations publiques	69	0	69
3.4.2.	Numéraire et dépôts	152 583	113873	38710
	Banque de France	- 16405	- 14 921	- 1484
	Administrations publiques	- 1293	- 1 595	302
	Institutions finandères monétaires	194166	130 389	63777
	Autres secteurs	- 23885	0	- 23 885
3.4.3.	Prêts	33796	30 335	3461
	Banque de France	- 3040	0	- 3040
	Administrations publiques	- 472	494	- 965
	Institutions finandères monétaires	20415	2 3 3 6	18079
	Autres sectours	16893	27506	- 10613
3.4.4.	Crédits commerciaux et avances	6795	5944	851
3.4.5.	Autres comptes à payer/à recevoir	66633	- 513	67146
	Administrations publiques	5500	0	5500
	Institutions finandères monétaires	5100	8662	- 3561
	Autres secteurs	56033	- 9175	65208
3.4.6.	Droits de tirage spéciaux		0	0
3.4.7.	Réserves techniques d'assurance	0	- 1472	1472
3.5.	Avoirs de réserve	- 20054	0	- 20054
	Or	12	0	12
	Avoirs en droits de tirage spéciaux	705	0	705
	Position de réserve au FMI	- 264	0	- 264
	Autres avoirs de réserve	- 20508	0	- 20508
4.	ERREURS ET OMISSIONS NETTES			- 14717

n.La. : non inclus par allieurs. Note : Les investssements directs sont présentés en principe directionnei étendu. En raison des écarts d'arrondis, les agrégats et les soides peuvent ne pas apparaître exactement égaux au total des composantes.

Exhibit 2.1.1 (3d): The French Balance of Payments 2023 Source: Banque de France (2024), pp 42n. [Retrieved April 3, 2025]

(c) Equation

For theoretical purposes, the BoP or parts of it are expressed in the form of equations.

2.1.2 The Accounts in More Detail

As mentioned before, the bop is divided into three "accounts": the current account, the capital account and the financial account. They are in turn subdivided into parts.

(1) Current account

The current account records all income transactions between domestic residents and foreigners, i. e. transactions which directly relate to currentperiod disposable income. Exhibit 2.1.2 (1) illustrates for the case of the euro area that it is divided up into four parts: the balance of trade in goods, the balance of trade in services, the income balance, and the balance of current unilateral transfers.

Exhibit 2.1.1 (3b) showed the balances for each of these. The balances are calculated as "credit minus debit" as becomes clear in the following exhibit:

	Current account									Capital a	ccount*		
	Total			Goods Services			ices	Primary	income	Secondary income			
	Credit	Debit	Balance	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit
	1	2	3	4	5	6	7	8	9	10	11	12	13
2024 Q1 Q2 Q3 Q4 2024 July Aug. Sep. Oct. Nov	1,439.0 1,492.5 1,466.1 1,455.1 491.3 490.5 484.3 480.2 486.3	1,331.2 1,358.0 1,382.0 1,362.3 460.2 467.0 454.8 450.9 461.2	107.8 134.4 84.1 92.7 31.2 23.5 29.4 29.3 25.1	706.5 715.1 704.9 722.8 235.5 235.2 235.2 235.7 235.7 244.0	599.5 615.9 621.0 623.1 204.2 210.1 206.7 204.2 209.1	365.2 387.7 373.2 366.8 125.0 126.6 121.5 120.0 120.8	331.8 336.6 339.0 323.1 112.9 114.5 111.7 105.5 109.6	321.3 343.1 338.1 320.6 113.9 112.0 112.2 108.8 106.2	320.6 316.4 329.7 324.5 112.0 111.7 106.1 110.8 112.4	46.0 46.5 49.9 44.8 16.9 16.6 16.4 15.6	79.3 89.2 92.3 91.7 31.2 30.8 30.3 30.4 30.4	18.9 25.2 20.5 31.5 6.8 8.5 5.2 6.6 5.8	31.6 22.1 15.8 20.9 5.8 4.5 5.5 4.1 4.6
Dec.	488.7	450.3	38.4	243.1	209.7	126.1	108.0	105.6	101.3	13.9	31.3	19.1	12.2
2024 Dec.	5,852.6	5,433.6	419.1	2,849.4	2,459.5	1,492.8	1,330.5	1,323.1	1,291.2	187.3	352.4	96.2	90.4
			12-	month cun	nulated trar	nsactions a	as a perce	ntage of Gi	DP				
2024 Dec.	39.0	36.2	2.8	19.0	16.4	9.9	8.9	8.8	8.6	1.2	2.3	0.6	0.6
1) The capital ac	count is not seas	onally adjusted	L										

(EUR billions; seasonally adjusted unless otherwise indicated; transactions)

Exhibit 2.1.2 (1): The Current Account of the Euro Area Source: European Central Bank (2025), p. S8. [Retrieved March 28, 2025]

(a) Account of trade in goods (account of foreign trade)

The balance of trade in goods registers the exports and imports of merchandise goods (EX_G , IM_G). Its balance (TB_G) is just the difference between the two:

(2.1) $TB_G = EX_G - IM_G$.

For the years 2020 to 2022, exhibit 2.1.2 (1a1) shows the geographical breakdown of the so-called external trade in goods of the euro area, i. e. of trade with countries outside the monetary union. More recent data are illustrated in graph 2.1.2 (1a2).

	Total	EU Member States outside	Russia	Switzer- land	Turkey	United Kingdom	United States	r	Asia		Africa	Latin America	Other
		area							China	Japan			
	1	2	3	4	5	6	7	8	9	10	11	12	13
						Exports	(f.o.b.)						
2020 2021 2022	2,126.5 2,423.4 2,865.3	460.3 552.9 652.4	62.4 70.6 45.8	132.4 145.6 175.3	57.9 64.9 81.8	238.6 239.6 279.5	314.6 356.4 454.5	509.1 577.5 652.0	180.5 200.8 208.3	48.4 54.7 63.1	113.1 132.0 162.7	82.9 102.9 130.6	155.4 180.9 230.8
2021 Q4	637.0	147.0	18.5	37.9	17.3	63.8	95.5	146.4	49.2	13.5	35.2	27.6	47.8
2022 Q1 Q2 Q3 Q4	677.2 715.5 733.1 739.5	156.9 163.0 166.3 166.2	16.0 9.3 9.9 10.5	40.1 43.2 44.9 47.2	18.3 19.6 21.7 22.2	65.0 71.6 71.3 71.6	104.2 115.3 116.2 118.9	156.2 160.1 167.5 168.1	52.3 50.7 53.5 51.8	16.3 15.3 14.8 16.7	38.5 40.8 42.2 41.2	29.5 33.5 33.4 34.2	52.7 59.1 59.7 59.2
2022 Oct. Nov. Dec.	248.6 251.2 239.7	55.9 55.9 54.5	3.4 3.7 3.5	15.5 15.8 15.8	7.2 7.4 7.7	24.6 25.4 21.6	39.9 41.0 38.1	56.9 56.0 55.2	17.6 17.1 17.1	5.7 5.7 5.2	14.6 13.9 12.7	11.3 11.6 11.3	19.4 20.5 19.4
2021 Dec.	100.0	22.8	2.9	6.0	2.7	9.9	14.7	23.8	8.3	2.3	5.4	4.2	7.5
2022 Dec.	100.0	22.8	1.6	6.1	2.9	9.8	15.9	22.8	7.3	2.2	5.7	4.6	8.1
						Imports	(c.i.f.)						
2020 2021 2022	1,893.4 2,311.8 3,186.8	432.9 508.9 615.7	73.9 129.4 161.3	103.1 117.5 138.4	49.6 61.7 76.0	148.2 132.7 198.4	185.8 211.5 323.0	635.1 784.0 1,085.5	312.0 383.4 508.6	48.7 54.4 61.3	95.4 136.1 217.3	73.2 89.8 121.9	96.2 140.2 249.4
2021 Q4	659.0	135.6	43.1	32.1	17.0	38.1	58.7	225.8	111.5	13.9	39.7	24.1	44.9
2022 Q1 Q2 Q3 Q4	720.9 810.3 855.5 800.1	143.5 152.9 159.9 159.4	50.0 46.0 38.0 27.2	34.1 34.0 38.0 34.3	18.1 19.2 19.6 19.2	41.3 54.5 56.3 46.4	69.2 80.1 88.5 85.2	246.5 275.5 288.3 275.3	122.8 130.7 132.1 122.9	14.2 15.3 15.9 15.8	43.4 57.5 59.2 57.2	26.4 31.2 32.4 31.9	48.4 59.5 77.5 63.9
2022 Oct. Nov. Dec.	276.6 265.6 257.9	53.6 53.4 52.4	9.9 9.0 8.4	11.3 11.0 12.0	6.5 6.4 6.3	16.6 15.4 14.4	30.2 28.6 26.4	96.8 93.2 85.3	44.2 41.4 37.4	5.3 5.3 5.2	19.5 18.2 19.6	11.0 10.9 10.0	21.1 19.7 23.1
				12-mont	th cumulated	l transaction:	s as percenta	age of total ir	nports				
2021 Dec.	100.0	22.0	5.6	5.1	2.7	5.7	9.2	33.9	16.6	2.4	5.9	3.9	6.1
2022 Dec.	100.0	19.3	5.1	4.3	2.4	6.2	10.1	34.1	16.0	1.9	6.8	3.8	7.8
						Bala	nce						
2020 2021 2022	233.1 111.6 -321.4	27.4 44.0 36.6	-11.5 -58.8 -115.5	29.3 28.1 36.9	8.2 3.2 5.8	90.3 107.0 81.1	128.8 144.8 131.5	-126.0 -206.4 -433.5	-131.5 -182.6 -300.3	-0.3 0.3 1.8	17.7 -4.1 -54.6	9.7 13.1 8.6	59.1 40.6 -18.6

(EUR billions, unless otherwise indicated; seasonally adjusted)

Exhibit 2.1.2 (1a1): Geographical Breakdown of Trade in Goods of the Euro Area

Source: European Central Bank (2023), p. 71. [Retrieved April 7, 2023]



Exhibit 2.1.2 (1a2): Geographical Breakdown of Trade in Goods of the Euro Area 2023 Q4 – 2024 Q3:

- left part: exports of euro area (credits)
- right part: imports of euro area (debits)

Source: European Central Bank (2025) [Retrieved March 28, 2025]

The following exhibit gives a survey of the recent regional structure of German merchandise trade and its change against previous years.

	Percentage	Annual perc	entage chan	9e
Country/group of countries	2024	2022	2023	20.24
Exports				
Euro area	37.9	19.2	-2.2	-2.4
Other countries	62.1	14.5	-0.5	-0.5
of which:				
United Kingdom	5.2	13.5	6.3	2.4
Central and eastern European EU countries ¹	13.3	16.9	-1.8	1.1
Switzerland	4,4	16.4	-5.4	1.8
Russia	0.5	-45,4	-38.8	-14.9
United States	10.4	28.1	1.1	2.2
Japan	1.4	12.4	-1.3	6.5
Newly industrialised economies in Asia ²	2.7	14.2	-5.6	-4,4
China	5.8	3.1	-8.8	-7.6
South and east Asian emerging market economies ³	2.4	14.3	5.7	0.4
OPEC	1.7	10.1	11.1	8.7
All countries	100.0	16.3	-1.2	-1.2
Imports				
Euro area	34.5	17.5	-6.4	-4.2
Other countries	65.5	30.8	-11.6	-2.3
of which:				
United Kingdom	2.8	25.4	-9.1	-1.1
Central and eastern European EU countries ¹	15.2	16.6	3.9	-2
Switzerland	4.0	13.2	-7.1	1.8
Russia	0.1	9.8	-90.1	-49.8
United States	6.9	29.1	1.4	-3.4
Japan	1.7	8.3	0.6	-11.2
Newly industrialised economies in Asia ²	2.5	27.6	-4.5	-10.1
China	11.9	34.9	-18.7	-0.3
South and east Asian emerging market economies ³	4.4	33	-7.3	0.5
OPEC	1.0	89.6	19.2	-28.1
All countries	100.0	26	-9.9	-3

1 Bulgaria, Czechia, Hungary, Poland, Romania.2 Hong Kong, Singapore, South Korea, Taiwan.3 India, Indonesia, Malaysia, Philippines, Thailand, Wetnam.

Exhibit 2.1.2 (1a3): German Foreign Trade by Region Source: Deutsche Bundesbank (2025), p. 177. [Retrieved March 29, 2025]

The following exhibit also shows which countries are Germany's most important partners in merchandise

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Group of countries/country		2022	2029	2024
All countries *	Seports Imports	1,504,343	1,575,209	1,551,542
L European countries	Seports	1,051,852	1,072,639	1,055,640
1. EU Member States (27)	Seports Imports	878,946	859,537 712,019	841,018 682,485
Euro area (20)	Balance Exports	+ 140,674 617,386 507,364	+ 147,518 609,547 474,607	 158,533 585,721 451,012
	No. STOCK	+ 110,121	+ 128,940	- 134,709
Augria	Seports Imports	90,280 58,161	80,255 53,744	76,544
Reigium and Luxembourg	Seports Imports	78,827 67,200	67,467 56,141	65,342 51,349
Rance	Exports Imports	118,225	119,825	115,812
Italy	Balance Reports	+ 48,244 89,149 79,271	+ 49,953 85,409 71,212	 48,429 80,479 67,465
Netherlands	Relance Seports	+ 15,878	+ 14,090	 13,014 109,654
Spain	Balance Exports	- 2,621 49,979	+ 8,934 54,097	+ 15,633 53,895
Other FLI Member	Relation Resource	+ 12,387 261,561	+ 15,401 255,990	 15,529 255,397
States	Relation	+ 30,553	+ 18,578	 231,472 23,825
2. Other European countries	Reports Relation	212,815 295,579 - 22,658	2118,096 162,219 + 50,878	- 58,094
of which: Switzerland	Exports Imports	20.641 55,724 + 14,877	66,780 51,757 + 15,002	58.015 52.596
United Kingdom	Seports Imports	73,767	78,407	#0,316 #6,327
I. Non-European countries	Seports Imports	497,428	487,748	490,545
1. Africa	Exports Imports	- 34,028 36,462 34,243	+ 15,480 28,742 32,477	- 19,494 26,292 82,166
2. America	Suports	210,652 132,019 132,019	- 4,745 216,528 120,487 + 86,051	219,110
of which: United States	Seports Imports	154,208	157,990	161,494
3. Ada	Balance Reports	+ 62,863 246,289 267,680	+ 68,296 238,709 212,055	 69,745 282,140 202,721
of which:	Relance	- 111,390	- 74,846	- 71,591
	Relation	+ 16,341	+ 15,989	 11,407 22,468
Japan	imports Balance	- 4,909	- 5,890	21,553 22,728 - 1,175
People's Republic of China P	Seports Interaction	106,752 190,855 - 86,093	97,346 156,821 - 59,484	89,953 156,392
New industrial countries and emerging markets of Asia ³	Seports Imports Relation	68,344 76,986 - 7,597	60,971 66,716 5,745	58,580 61,912
 Cosania and polar regions 	Seports Imports	14,624	18,759 6,249 + 7,510	12,004 5,785
Source: Federal Statistical Office. (c.1.f.) by country of origin. Individu	Seports (fig	b.) by country and groups of	of destination countries acc	, imports
the current position. Euro area including and algorithm and algorithm	1. Croatia. 1	Including fue	and other su	pples for
while and ancient and other data r	instanting and a second second		a saturating Ho	

Exhibit 2.1.2 (1a4): German Foreign Trade (Special trade) by Country and Group of Countries Source: Deutsche Bundesbank (2025), p. 77*. [Retrieved March 29, 2025]

cappore. Taiwan and Thailand.

(b) Account of trade in services

This part of the bop registers the sales and purchases of services (EX_s , IM_s). Important items are services in the fields of travel and of transportation; an example for an import of services would be the overnight stay in a hotel abroad. Financial services, patents and licenses are other important elements in this field of international trade.

As in the case of trade in goods, the balance (TB_s) can be calculated as the difference between exports and imports:

(2.2) $TB_{S} = EX_{S} - IM_{S}$.

The next exhibit shows important elements of German trade in services with foreign countries. (The last two columns belong to the income balance that we are going to discuss in subsection (c).)



Exhibit 2.1.2 (1b): German Service Trade and External Income Payments Source: Deutsche Bundesbank (2025), p. 78*. [Retrieved March 29, 2025]

(c) Account of (primary) income

This part of the current account registers the receipts and payments of income that result from exports and imports of factor services:

- we receive income from the export of services of the three primary production factors labour, capital and soil (EX_F); the income received is entered as a credit and indicates the value that foreigners attribute to the use of our primary factors of production
- by analogy, the import of foreign factor services (IM_F) is shown as a debit.

Capital income includes interest payments as well as dividends and leases. As an example, take the case of German "investment income" in the very last column of exhibit 2.1.2 (1b2) above: the figure represents net income, i. e. the difference between capital income received and paid.

In the praxis of bop statistics, only part of total labour income from abroad is booked in the balance of income, namely the wages of employees. Again look at the table above where we see the net German income in this field. As an illustrative example for the export of labour services, take the wages of people domiciling in Konstanz (Germany) and working in Switzerland. Income of self employed people is booked in the balance of services.

The balance on (primary) income (IB) is just the difference between exports and imports of factor services:

(2.3)
$$IB = EX_F - IM_F$$
.

(ELID billions: transactions)

Columns 8 – 11 of exhibit 2.1.2 (1) above display results for the euro area. They show the aggregate income as well as the labour income of employees. Flows of capital income for 2020 - 2022 are shown in detail in the next table.

(LOIV DIIIOIIS	, uansacuo	113)													
	Tot	al			Direct in	vestment			F	Portfolio in	vestment		Other inve	Reserve assets	
	Credit Debit			Equ	iity		Debt instruments		Equity		Debt securities		Credit	Debit	Credit
			Cre	edit Reinv. earnings	De	bit Reinv. earnings	Credit	Debit	Credit	Debit	Credit	Debit			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2020 2021 2022	638.7 743.3 790.5	650.6 706.5	294.1 395.1	25.6 81.3	290.7 354.1 270.7	97.4 109.4	74.5 67.6	68.0 66.4	79.3 97.0	154.7 167.5 206.7	128.3 126.4	88.5 78.5	58.6 54.0 76.0	48.6 39.9	4.0 3.2
LVLL	100.0	000.0	333.0	31.4	515.1	142.0	04.2	00.2	111.4	200.1	100.0	00.4	10.5	00.5	3.0

Exhibit 2.1.2 (1c): Flows of Investment Income between the Euro Area and the Rest of the World Source: European Central Bank (2023), p. 61. [Retrieved April 7, 2023]

The accounts discussed so far register exchanges as well as unilateral transfers. The two accounts that follow only record unilateral transactions, so-called transfers. More precisely, they take the counter-entries (!) for unilateral transactions.

The bop statistics distinguishes between current transfers and capital (or: asset) transfers. The current account only encounters the current transfers.

(d) Account of current transfers (secondary income)

Current transfers occur more or less regularly, change disposable income and thereby consumption and saving. Examples:

- regular sending of teachers to a Romanian university offering a complete programme (BA in Management) in German language: this would enter the balance of (primary) income as a credit (EX_F) while the counter-entry would be a debit in the balance of current transfers (CT_{giv})
- periodical payments that a foreign student residing in Germany gets from his parents abroad (or from a scholarship by his government)
- the following exhibit 2.1.2 (1d) shows that the German balance of current transfers is strictly negative, i. e. we give more transfers than we receive. The most important items are transfers given to international organizations, most of all to the EU, and remittances from so-called guest-workers to their families in the countries of origin; all of these payments are first booked in the financial account and then, with their counter-entry, in the balance of current transfers.

The balance of the account of current transfers (CTB) is simply the difference between the current transfers received (CT_{rec}) and the current transfers given (CT_{giv}):

- é milion Capital accounts econdary income General government Ni sectors excluding general government ² of which: of which enoral transfe Current and services of 100 200 esident and of which Current Non-produced international on-resident non-financial ncome, wealth Noness (aprox) 263 100 100 copperation a 10 outeholds a en tance **MARKS** tandes ions. 22 11,620 18,298 22,689 2,547 560 \$2,455 25,000 10.050 5,600 0.040 10.520 6.973 1000 302H -6,947 17,264 11,840 -1,000 1.825 6,178 6,170 1,400 14,036 68,441 67,621 40,473 15,081 27,968 -8,009 7,420 2.149 26,249 26,271 16,009 4,793 3003 • ------2022 14,605 680 6.045 1.734 26,875 15,799 6380 1004 61.015 14,661
- $(2.4) CTB = CT_{rec} CT_{giv}$

1 Excluding capital transfers, where identifiable. Includes current international cooperation and other current transfers. 2 Includes insurance premiums and claims households.

Exhibit 2.1.2 (1d): Secondary Income and Capital Account of the Federal Republic of Germany (Balances) Source: Deutsche Bundesbank (2025), p. 78*. [Retrieved March 29, 2025] (e) Current account as a whole

We sum up the four balances discussed so far. The resulting balance is called the balance on current account (CA):

 $(2.5) CA = TB_G + TB_S + IB + CTB .$

The left part of the following graph shows the developments of the balance on current account of the euro area. It also illustrates the balances of its main sub-accounts.



Exhibit 2.1.2 (1e1): The Balance on Current Account of the Euro Area Source: European Central Bank (2025a). [Retrieved March 29, 2025]

The left part of the next graph shows Germany's balance on current account in total. The right part illustrates that balance vis-à-vis Germany's partner countries from the euro area.



Exhibit 2.1.2 (1e2): Germany's Current Account Balance Source: Deutsche Bundesbank (2025), p. 168. [Retrieved March 29, 2025]

(2) Capital account

The capital account records two quite different types of transactions:

- acquisition and disposal of non-produced, nonfinancial items: these include natural resources (generally land) and intangible assets (e. g. contracts, leases, licenses, marketing assets, copyrights, trademarks, and patents)
- capital transfers receivable and payable between residents and non-residents; they redistribute wealth between residents and non-residents but leave saving unaffected, see European Commisson / IMF / OECD / UN / World Bank (2009), p. 44

Capital transfers are transfers in which the ownership of an asset (other than cash or inventories) changes from one party to another; or which obliges one or both parties to acquire or dispose of an asset (other than cash or inventories); or where a liability is forgiven by the creditor. A capital transfer results in a commensurate change in the positions of assets of one or both parties to the transaction <u>without</u> affecting the saving of either party. The capital transfers include debt forgiveness and assumption, extraordinary claims associated with nonlife insurance, and investment grants.

Capital transfers can be large (particularly in the case of capital transfers) and are usually irregular in nature. In contrast to current transfers, capital transfers thus often have a <u>one-time</u> character or, at least, do not occur regularly. (In statistical practice, a transfer is classified as a capital transfer if at least one of the two partners views it as one-time.) As income is seen as a regular flow, capital transfers are not part of current disposable income but rather change wealth; thus, they are also called asset transfers.

The capital account takes <u>cross</u>-entries for capital transfers. As an example, take the apartment that a German resident inherits from his "rich uncle" in the USA: it is entered as a debit in the financial account (CEX) while the counterentry is a credit in the capital account (KA_{rec}); without that entry, the second entry would be missing, and the fundamental rule of double-entry bookkeeping would be violated. This illustrates that the entry in the capital account is an <u>offset</u> to an unrequited transfer of a capital item registered in another account of the balance of payments.

Among other things, the balance of capital transfers comprises debt forgiveness. However, it does not include involuntary debt cancellation, such as results from unilateral defaults; these are counted as capital losses, i. e. as valuation effects; see Feenstra/Taylor (2012), p. 574. They can thus not be included in the bop which only registers transactions, not pure valuation changes. [We may explain this by the fact that transactions presume an agreement between the two counterparties: while a debt forgiveness is based on an agreement, a default is not.]

As mentioned above, in addition to the transfer items mentioned so far, the account also shows the acquisition and disposal of non-financial, non-produced assets (like patents, trademarks, copyrights, etc.). They do not appear in the financial account; only the payments connected with them are recorded in the financial account. So, again we need the entry in the capital account to respect the principle of double-entry bookkeeping.

Much like the balance on current transfers, the balance on capital account (KA) is the difference between transfers received and given:

$$(2.6) KA = KA_{rec} - KA_{giv}.$$

Summing up the balances on current account (CA) and on capital account (KA) gives net lending/net borrowing to/from abroad (NL). Column 7 of exhibit 2.1.1 (3b) shows empirical results for the euro area.

(3) Financial account

The financial account registers the changes of domestic residents' assets and liabilities against foreigners if these changes result from transactions. This definition covers very different types of assets: financial assets such as loans, bonds, equity as well as real assets such as buildings (nonfinancial assets produced).

If we present the bop in account form, transactions in liabilities are entered on the left-hand side of the bop while transactions in assets figure on the right-hand side; see exhibit 2.1.1 (3a) above. More precisely ...

- ... the left-hand side shows the <u>net</u> incurrence of (foreign!) liabilities which is the difference between the incurrence of new liabilities and the repayment of old ones; a positive net incurrence means that we have borrowed "fresh" financial means in excess over the redemption of old funds; it thus indicates an inflow of payments (just like an export of goods implies an inflow of payments).
- ... the right-hand side shows the <u>net</u> acquisition of (foreign!) assets: it thus takes the entries of the acquisition of additional assets as well as the entries of foreign assets leaving our country.
- ... the balance (FA) shows the incurrence of net foreign liabilities.

We note that the financial account includes market transactions (exchanges) as well as transfers of assets; the counter-entries of the latter are then recorded in the capital account.

The financial account is split up into two parts, the commercial financial account and the balance of official settlements. Its two balances sum up to the balance on financial account (FA):

 $(2.7) \quad \mathsf{FA} = \mathsf{CFA} + \mathsf{OSB}.$

(a) The non-reserve financial account (commercial financial account)

This part takes all financial transactions except transactions in so-called official reserve assets. As they are to the most part governed by commercial considerations, we call this part of the bop "commercial financial account". The net incurrence of non-reserve liabilities is traditionally called "capital import" (CIM). Likewise, the traditional name of the net acquisition of non-reserve assets is "capital export" (CEX).

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Transactions in the non-reserve part of the financial account are classified into the following categories:

- Direct investment: a direct investment aims at a lasting entrepreneurial influence abroad. In practice, a transaction is classified as a direct investment if it leads to a share of at least 10 % in a foreign company's equity
- Portfolio investment includes transactions in securitized assets and liabilities, with the exception of direct investment.
- Transactions in financial derivatives include sales and purchases of options, futures etc.
- All other non-reserve asset transactions are classified as "other investment".

The balance of the commercial financial account (CFA) is the difference between capital imports and capital exports:

(2.8) CFA = CIM - CEX.

The following exhibit shows detailed results for German financial transactions with the rest of the world.

€ billion

Item	2022*	2023 ^r	2024
Financial account balance ¹	+ 150.7	+ 195.4	+ 239.4
1. Direct investment	+ 60.9	+ 24.2	+ 30.3
Domestic investment abroad ²	+ 142.4	+ 95.8	+ 73.7
Foreign investment in the reporting country ²	+ 81.5	+ 71.6	+ 43.4
2. Portfolio investment	+ 13.8	+ 2.2	+ 31.4
Domestic investment in foreign securities ²	+ 11.6	+ 154.7	+ 219.8
Shares ³	- 15.2	- 4.8	+ 4.8
Investment fund shares ⁴	+ 32.3	+ 29.5	+ 112.1
Short-term debt securities ⁵	+ 16.3	+ 6.5	+ 11.8
Long-term debt securities ⁶	- 21.8	+ 123.5	+ 91.1
Foreign investment in domestic securities ²	- 2.3	+ 152.5	+ 188.4
Shares ³	- 5.7	- 13.2	- 5.6
Investment fund shares	- 3.3	- 2.2	- 1.6
Short-term debt securities5	- 33.8	+ 8.7	- 14.7
Long-term debt securities ⁶	+ 40.6	+ 159.2	+ 210.3
3. Financial derivatives ⁷	+ 44.6	+ 35.8	+ 42.0
4. Other investment ⁸	+ 26.9	+ 132.5	+ 137.1
Monetary financial institutions ⁹	- 93.6	+ 97.4	+ 107.4
Short-term	- 125.9	+ 104.8	+ 118.4
Long-term	+ 32.2	- 7.4	- 11.0
Enterprises and households ¹⁰	+ 35.1	+ 60.6	+ 33.7
Short-term	+ 33.3	+ 77.0	+ 37.2
Long-term	- 18.1	- 19.3	- 17.9
General government	- 19.4	+ 8.6	- 7.2
Short-term	- 20.2	+ 2.7	- 3.5
Long-term	+ 0.8	+ 5.7	- 3.8
Bundesbank	+ 104.9	- 34.1	+ 3.2
5. Reserve assets	+ 4.4	+ 0.9	- 1.4

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

Exhibit 2.1.2 (3a1): Germany's Financial Account Source: Deutsche Bundesbank, (2025), p. 196. [Retrieved April 3, 2025]

Exhibit 2.1.1 (3b) above contained the net amounts of the various types of financial transactions between the euro area and the rest of the world. Detailed results are shown in the middle part "transactions" of the following exhibit 2.1.2 (3a2). In the upper part of the table we see the stocks ("out-standing amounts") of the various types of assets and liabilities. In anticipation of section 2.2 we already note that they not only change because of transactions but also because of various "other changes".

		Total®		Direct in	vestment	Portfolio in	nvestment		Other in	vestment		
	Assets	Liabilities	Net	Assets	Liabilities	Assets	Liabilities	Net financial derivatives	Assets	Liabilities	Reserve assets	Gross external debt
	1	2	3	4	5	6	7	8	9	10	11	12
				Outstandin	g amounts	(internation	al investme	nt position)				
2023 Q4	32,386.9	32,041.0	345.9	12,121.5	9,944.6	12,465.4	14,520.1	-4.0	6,656.2	7,576.3	1,147.8	16,219.7
2024 Q1	33,684.6	33,138.9	545.7	12,390.0	10,014.1	13,124.9	15,268.1	-0.5	6,955.1	7,856.7	1,215.1	16,699.7
Q2	34,253.2	33,286.0	967.2	12,398.7	9,921.7	13,540.9	15,549.6	7.1	7,038.9	7,814.7	1,267.6	16,653.6
Q3	34,531.2	33,419.0	1,112.2	12,171.4	9,733.1	13,843.4	15,888.5	-3.9	7,201.3	7,797.4	1,319.0	16,690.5
				Outs	tanding amo	ounts as pe	rcentage of	GDP				
2024 Q3	230.2	222.7	7.4	81.1	64.9	92.3	105.9	0.0	48.0	52.0	8.8	111.2
					1	ransaction	s					
2024 Q1	568.3	453.8	114.5	128.2	32.3	172.1	198.5	13.5	253.4	223.1	1.2	
Q2	180.2	51.3	128.9	-31.7	-104.8	173.1	254.2	16.9	18.1	-98.1	3.7	
Q3	412.3	274.2	138.0	5.4	-12.7	166.5	217.4	-8.3	252.6	69.5	-4.0	
Q4	-13.1	-112.9	99.8	-28.0	-16.7	152.0	141.2	20.6	-161.5	-237.4	3.9	
2024 July	127.8	78.1	49.7	14.4	-11.9	51.9	59.9	-2.2	66.9	30.1	-3.1	
Aug.	94.1	69.5	24.6	-9.6	-1.9	40.6	64.3	-7.7	73.8	7.1	-3.0	
Sep.	190.4	126.7	63.7	0.6	1.2	74.0	93.1	1.6	112.0	32.4	2.2	
Oct.	86.3	49.7	36.6	11.9	7.7	69.5	41.7	20.2	-15.1	0.3	-0.2	
Nov.	165.8	152.3	13.5	6.8	1.5	38.6	61.7	-1.8	120.9	89.2	1.3	
Dec.	-265.2	-315.0	49.8	-46.7	-25.9	43.9	37.9	2.2	-267.3	-326.9	2.7	
					12-month o	umulated tr	ansactions					
2024 Dec.	1,147.7	666.5	481.2	74.0	-101.9	663.7	811.2	42.6	362.6	-42.9	4.8	
				12-month c	umulated tr	ansactions	as percenta	age of GDP				
2024 Dec	76	4.4	22	0.5	0.7	4.4	5.4	0.2	24	0.2	0.0	

(EUR billions, unless otherwise indicated; outstanding amounts at end of period; transactions during period)

Exhibit 2.1.2 (3a2): Financial Account of the Euro Area Source: European Central Bank (2025), p. 62. [Retrieved March 28, 2025]

Results for French financial account ("compte financier") can be found in exhibit 2.1.1 (3d) above.

(b) Official settlements balance

The official settlements balance exclusively registers transactions in a very special type of assets, the so-called official reserve assets.

Official reserve assets are those assets of the central bank that can be used to cover an excess demand for any foreign currency directly or indirectly. They may take the following forms:

- "convertible" foreign currencies, i. e. foreign currencies which are accepted everywhere in the market for foreign exchange; the most important example in this field is the US dollar, followed by the euro, the Japanese Yen, the British Pound and the Swiss Franc
- other assets that can be exchanged at any time against convertible currency without noticeable losses: gold, the so-called special drawing rights (SDR) issued by the International Monetary Fund (IMF) and the reserve position held with the IMF.

In the statistical practice of the euro area, the bop only shows official reserve assets, but not liabilities. We may realize this from exhibit 2.1.2 (3a2) that we just looked at: its second-last column has the title "reserve assets" while there are no liabilities. The following exhibit shows transactions in the various forms of reserve assets for the second quarter of 2024.

Just like the bop of the euro area, the German bop only shows changes in official reserve <u>assets</u>, but not in liabilities. This is different for the case of the country that issues the world's most important reserve currency, the USA: its bop also shows official reserve liabilities; see Feenstra/Taylor (2012), p. 579; Krugman/Obstfeld/ Melitz (2018), p. 365 [(2012), p. 339].

Reserve assets

	Total	1,394.0
•	Monetary gold	
	In EUR billions	869.1
	In fine troy ounces (millions)	346.115
	SDR holdings	191.4
	Reserve position in the IMF	32.3
	Other reserve assets	
	Currency and deposits	
	With monetary authorities, IMF and the BIS	34.2
	With banks	2.7
	Securities	
	Equity and investment Fund shares	7.5
	Debt securities	
	Long-term	206.2
	Short-term	38.0
	Financial derivatives (net)	0.0
	Other claims	12.6
M	emo items	
	Other foreign currency assets	11.7
	Pre-determined short-term net drains on foreign currency	-25.3

1) Data refer to the changing composition of the euro area, in line with the approach adopted for the reserve assets of the Eurosystem. For further information, see the General Notes.

Exhibit 2.1.2 (3b): Transactions in Reserve Assets of the Euro Area 2024 Q4. Source: European Central Bank (2025a). [Retrieved April 3, 2025] As mentioned before, reserve assets can serve to intervene in the foreign exchange market. In addition, they are part of the central bank's total net foreign assets; therefore, they are one of the sources of central bank money, i. e. of the so-called monetary base. In order to calculate the change of the central bank's total net foreign assets, we need – next to the change in official reserves – the changes of all the other types of foreign assets and liabilities of the central bank; as far as these changes are caused by transactions, they are recorded in the bop, more precisely in the non-reserve part of the financial account. We are going to analyse the relation between currency reserves and the quantity of money in section 3.5.

As transactions in liabilities are not recorded, the balance on official settlements (OSB) is just the (negative!) change in official reserve assets due to transactions ($\Delta^{trans}OR$):

(2.9) OSB = $-\Delta^{\text{trans}}OR$.

(5) Balance of payments and "balance of payments"

(a) The "balance of payments"

We integrate the current account, the capital account and the <u>non-reserve</u> financial account. The sum of their balances gives us the overall balance (BP). In former times, this figure was called the "balance of payments":

(2.10) BP = CA + KA + CFA.

As we will now see, this terminology is highly misleading as the balance of the bop as a whole is of necessity always zero.

(b) The fundamental bop identity

Because any international transactions give rise to credit and debit entries of equal value, the bop as a whole is always balanced. This means that the balances of its three accounts – the current account, the capital account and the financial account – sum up to zero:

(2.11) 0 = CA + KA + FA.

(c) The "balance of payments" and changes in official reserves

We plug (2.7) into (2.11) to find the following equation:



Combining this equation with (2.10), we find that the balance on official settlements (OSB) is just equal to the negative "balance of payments" (BP):

(2.13) OSB = - BP .

From (2.9), it follows that the "balance of payments" is just equal to the change in official reserve assets (as far as this change is due to transactions).

(2.14) BP = $\Delta^{\text{trans}}OR$

This equality explains the interest in this highly misnamed balance. In the words of Krugman/Obstfeld/Melitz (2022), pp 371n [(2012), p. 343]:

"The level of net central bank financial flows is called the official settlements balance or (in less formal usage) the balance of payments. This balance ... indicates the gap that official reserve transactions need to cover. ... The balance of payments played an important historical role as a measure of disequilibrium in international payments, and for many countries it still plays this role. A negative balance of payments (a deficit) may signal a crisis, for it means that a country is running down its international reserves or incurring debts to foreign monetary authorities. If a country faces the risk of suddenly being cut off from foreign loans, it will want to maintain a "war chest" of international reserves as a precaution. Developing countries, in particular, are in this position." 2.2 External Wealth: the International Investment Position

(1) International investment position: stock account

The bop registers transactions (i. e. flows) between domestic residents and foreigners. It is supplemented by an account of the foreign assets and liabilities of a country, the so-called international investment position. It can be considered as a country's external balance sheet. Insofar, it is basically an account of stocks; however, it also shows the various kinds of changes in foreign assets and liabilities.

The international investment position classifies foreign assets and liabilities into the same categories as does the bop with financial transactions: direct investment, portfolio investment, financial derivatives and other investment.

Net foreign assets (NA^f) are just the difference between foreign assets held by domestic residents (A^f) and domestic liabilities held by foreigners (L^f):

(2.20) $NA^{f} = A^{f} - L^{f}$.

Foreign assets (A ^f)	Foreign liabilities (L ^f)
	Net foreign assets (NA ^f)

Exhibit 2.2 (1a): International Investment Position as an Account

Feenstra/Taylor [(2012), p. 583] call the net foreign assets "external wealth". In the official terminology of the USA it is called "net international investment position" (NIIP).

The upper part of exhibit 2.1.2 (3a2) shows the international investment position of the euro area. The following table contains data on Germany's international investment position published by the Deutsche Bundesbank (2021a).

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	€ million									€ million																			
		Direct invest	ment 1								Portfolio inve	stment							ment										
			Equity				Debt instrum	ents							Debt securi	ties			Loans 8, 9		Currency and	i deposits 🛛							
								Direct					Invest		Short-	Long-	Financial derivat- ives and employee stock			of which: Monetary Inancial nstitutions jexcl. central		of which: Monetary financial institutions (excl. central	Trade credits and	Insurance, pensions and stand- ardised guarantee	Other	Other accounts receivable/	Special drawing	Reserve	
End of	Total	Total	Total	Listed	Unlisted	Other 2	Total	enterprises	investors a	enterprises	Total	Shares 4	shares 5		term 6	term 7	options	Total	Total I	bank) 10	Total 1	bank) 10	advances 11	schemes	equity 12	payable	rights	assets	End of reporting
period	1	2	3	4	5	6	7	8	9	10	11	12	13		- 14	13	10		10	19	20	21	22	23	24	25	20	21	pariou
	Assets													1	22.202	1 1 216 200	016.040	1 2 500 101	694 790	ACC 614	1 600 272	071.004	1 117 120	24 201	20 455 1	24.144	_	Assets	2011
2011	6 8/10 /08	1 310 013	1 050 123	I /1 825	400 148 I	518 150 J	260 789	225 540	35 2/0		1 830 671	I 101 682	1 308/188		25,295	1,316,208	916,040	2,598,181	595,233	455,614 442,010	1,818,164	8/1,984 814,539	81,894	34,301	51,250	24,144	-	184,603	2011
2012	7,299,763	1,461,814	1,122,085	44,869	535,467	541,749	339,729	172,229	52,736	114,764	2,090,409	221,582	343,513		27,634	1,541,284	629,416	2,421,054	565,743	404,753	1,647,127	782,918	83,900	40,817	60,704	22,763	-	143,753	2013
2013 2014	6,943,122 7,658,350	1,517,076 1.643.356	1,148,613	49,586	550,575 603,858	548,452 593,304	368,463 404,230	189,260 213,304	56,129 66,414	123,074 124,512	2,231,823	281,433 329,128	381,472		27,827	1,731,272	791,334	2,535,182	585,198	414,978	1,723,883	898,652	90,300	46,493	67,279	22,029	-	158,745	2014
2015	7,889,157	1,798,972	1,342,383	39,358	657,031	645,994	456,589	250,414	70,951	135,224	2,664,748	379,261	491,202		21,675	1,772,610	665,276	2,600,629	593,749	423,991	1,772,493	843,711	87,590	54,429	69,698	22,670	-	159,532	2015
2016	8,282,682	1,890,089	1,418,333	41,360	693,343 729,850	683,630	471,756	253,273	72,463	146,020	2,823,991	425,190	532,211		19,794	1,908,273	475,176	2,857,285	617,949	441,918	1,981,903	761,915	97,762	56,952	78,342	24,303	-	166,842	2017
2018	8,817,030	2,159,349	1,650,299	48,499	812,064	789,736	509,050	266,356	81,010	161,684	3,037,828	446,278	639,234		20,273	1,932,043	425,783	3,020,932	666,199	489,248	2,071,630	779,797	104,212	65,320	88,570	25,001	-	173,138	2018
2019	9,670,827	2,329,970	1,793,949	61,754	879,373	852,822	536,021	291,305	78,876	165,840	3,478,084	586,652	765,893		27,885	2,097,654	625,033	3,038,445	698,168	512,955	2,038,729	821,916	105,496	66,856	103,745	25,451	-	199,295	2019
2020 2021	10,558,059	2,449,170 2,735,811	1,865,305 2,079,613	62,583	914,503	988,219 988,874	583,865 656,198	295,693 329,079	103,648	184,524	4,123,151	6/2,480 896,357	841,873		31,852	2,167,708	840,227	3,335,622	716,610	522,855	2,298,721	878,767	100,020	68,649 89,371	125,207	26,415	-	219,127	2020
2022	12,223,943	2,846,252	2,123,045	79,132	1,022,109	1,021,804	723,207	380,504	119,648	223,055	3,632,184	740,983	1,054,023		43,874	1,793,304	1,581,665	3,887,354	834,212	616,126	2,613,470	927,767	136,700	95,384	179,167	28,421	-	276,488	2022
2023	13,864,474	3,083,308	2,291,618	77,725	1,100,066	1,113,827	791,690	419,181	126,824	245,685	4,585,958	1,013,617	1,397,327		50,969	1,983,963	1,486,928	3,868,843	842,149	627,261	2,575,671	935,830	129,538	92,250	199,886	29,349	-	292,259	2023
													-	I	00,745	2,114,209	1,704,075	4,040,020	952,945	691,150	2,031,002	1,059,004	120,150	105,556	210,140	50,445	-	303,703	2024
2011	Clabilities	067 633	459.265	1 20 112	42.754	204 208 1	500.360 J	241.025	100 333		2 470 105	451.072	111.247																
2011	6,548,234	1,097,422	458,265	29,374	43,754 40,930	405,364	621,754	138,377	273,980	209,397	2,479,196	588,168	123,929		192,010	0 1,723,96	7 929,13	6 1,972,269	515,768	-	1,204,658	885,238	114,047	110,338	5,082	8,065	14,311	-	2011
2013	6,242,807	1,159,805	486,216	37,722	42,155	406,339	673,589	166,648	286,313	220,628	2,745,065	779,060	126,983		186,44	3 1,827,963 1 1,679,49	3 948,15 1 618,07	7 1,912,031 1 1,719,866	1 335,279 5 317,424	-	1,339,725	928,784	94,423	115,059	5,284 5,273	8,203 7,665	14,058	-	2012
2014	6 836 777	1 278 127	549 016	41 506	43,671	463,839	729 111	161 411	333 7/49	233 951	3 002 637	902 376	135,237		155,32	1 1,861,81	1 814,21	6 1,788,580	323,752	-	1,213,456	831,523	98,958	125,086	5,260	7,688	14,380	-	2014
2016	7,043,987	1,344,914	570,326	41,388	46,109	482,829	774,588	172,212	357,280	245,096	2,996,306	930,492	136,275		171,254	4 1,793,77	0 681,11	9 1,874,894	4 324,187 7 312 387	1 -	1,282,713	816,274	102,888	135,111	5,456	9,190	15,349	-	2015
2017 2018	7,081,067	1,430,910	615,913 621,186	55,378 43,757	56,380 59,698	504,155	814,997 912,272	190,632 200.051	362,897 427,396	261,468 284,825	3,017,067	1,068,480 851,595	136,850		149,95	4 1,661,78	489,84	5 2,143,245	323,036	-	1,554,834	903,441	108,481	129,453	5,458	7,661	14,322	-	2017
2019	7,601,807	1,608,536	645,639	62,617	68,775	514,247	962,897	218,984	453,179	290,734	3,108,891	1,049,886	126,808		163,30,	1 1,753,88	7 657,51	8 2,226,862	334,079	-	1,531,237	913,746	113,735	153,810	6,063	10,447	14,656	-	2018
2020	8,344,694	1,771,712	715,193	80,021	82,665	552,507	1,056,519	260,388	475,621	320,510	3,251,147	1,050,066	122,256		232,62	3 1,846,20	2 849,72	0 2,472,119	5 376,484	-	1,790,320	1,023,194	119,086	154,113	6,880	11,019	14,213	-	2020
2022	9,455,431	1,983,907	817,499	64,643	114,605	638,251	1,166,408	294,034	511,879	360,495	2,827,420	899,235	112,480		261,51	3 1,784,18 2 1,579,40	9 739,00	1 3,024,789 6 3,113,798	9 467,550 8 443,131	_	2,169,247	1,206,213	139,125	179,368	8,777	14,268	46,454 47.048	-	2021
2023 2024	9,686,904	2,061,483	869,683 927,271	66,734 79,202	126,668 130.677	676,281 717,392	1,191,800	307,364 297.025	517,779 547.068	366,657 350.942	3,196,547 3,509,080	1,050,482	124,276		236,37	9 1,785,41	0 1,460,07	5 2,968,799	493,624	-	2,041,600	1,307,450	160,319	203,290	11,660	12,611	45,695	-	2023
	1				1	1									208,77	2 1,966,49	4 1,/54,62	9 2,998,171	494,986	-	2,048,190	1,372,105	100,234	216,159	12,929	10,544	47,149	-	2024
2011	Balance	242.200	501.050		445 2011	(12) 752	240 570	115.05	122.002		600 F05	260.200																	
2011	615,650	343,280	591,858 646,417	15,495	446,394 494,537	123,752	- 248,579	33,852	- 221,244	- 94.633	- 639,525	- 366,586	219,584		- 168,71	7 - 407,75	9 - 13,09	6 625,91	2 169,012	455,614	494,715	- 13,254	3,081	- 76,037	33,373	16,079	- 14,311	184,603	2011
2013	700,315	357,271	662,397	11,864	508,420	142,113	- 305,126	22,612	- 230,184	- 97,554	- 513,242	- 497,627	254,489		- 160,49	2 - 328,60 7 - 138,20	0 6,63 7 11,34	5 692,08 5 701,18	7 259,954 8 248,319	442,010	478,439	- 114,245	- 12,529	- 80,598	45,966 55,431	14,913 15,098	- 14,058 - 13,486	188,630 143,753	2012
2014	855,917	433,026	712,147	7,140	562,922	142,085	- 2/9,121	58,055	- 236,884	- 100,292	- 459,574	- 516,202	314,660		- 127,49	4 - 130,53	9 - 22,88	32 746,60	2 261,446	414,978	510,427	67,129	- 8,658	- 78,593	62,019	14,341	- 14,380	158,745	2014
2015	1,238,695	520,845	848,007	- 2,148	647,234	200,801	- 302,832	81,061	- 284,817	- 98,727	- 172,315	- 505,302	395,965		- 149,57	9 - 21,16	0 - 15,84	3 725,73	5 269,562	423,991	489,780	27,437	- 15,298	- 80,682	64,242 68,138	13,480	- 15,349	159,532	2015
2017	1,466,276	563,245	871,630	- 11,628	673,470	209,788	- 308,385	81,332	- 280,904	- 108,813	36,818	- 590,865	511,353		- 130,16	0 246,49	0 - 14,66	59 714,04	0 294,91	441,918	427,069	- 141,526	- 10,719	- 72,501	72,884	16,716	- 14,322	166,842	2017
2018	2,069,020	721,434	1,148,310	- 863	810,598	338,575	- 403,222	72,321	- 374,303	- 123,141	369,193	- 463,234	639,085		- 143,02	9 279,60	1 - 18,92 7 - 32,48	2 777,26	2 332,120 3 341,242	489,248	440,393	- 98,389	9,523	- 68,490	82,864 97,682	14,554	- 14,656 - 14,880	173,138 199,295	2018
2020	2,213,365	677,458	1,150,112	- 17,438	831,838	335,712	- 472,654	35,305	- 371,973	- 135,986	462,766	- 377,586	719,617		- 200,77	1 321,50	6 - 9,49	863,50	7 340,126	522,855	508,401	- 234,765	- 19,066	- 85,464	118,327	15,396	- 14,213	219,127	2020
2021	2,584,983	834,126	1,296,069	1,696	904,931	389,442	- 461,943	41,626	- 355,063	- 148,506	762,031	- 286,458	936,869		- 233,82	5 345,44	6 1,72	725,71	4 317,937	572,099	395,033	- 327,446	- 7,004	- 89,997	143,144	13,055	- 46,454	261,387	2021
2022	2,936,163	881,434	1,303,622	10,312	920,421	372,889	- 422,188	108,372	- 396,373	- 134,187	835,573	- 191,763	1,014,193		- 185,41	0 198,55	3 26,85	3 900,04	4 348,525	627,261	534,071	- 371,620	- 30,781	- 111,040	188,226	16,738	- 45,695	292,259	2022
2024	3,500,288	961,002	1,364,347	- 1,477	969,389	396,435	- 403,345	122,156	- 420,244	- 105,257	1,076,878	- 166,618	1,265,749		- 148,02	7 125,77	5 50,04	1,048,65	7 437,959	691,150	583,612	- 312,441	- 38,098	- 112,783	205,217	19,899	- 47,149	363,705	2024
	 Financial relation investment if 10 investor or direction 	tionships wit 0% or more o actly and indi	h domestic a f the shares of rectly combin	nd foreign ent or voting rights and more that	erprises are cli are directly at 50% of the	assified as di tributable to shares or yet	rect and the inves	all real estat tments in rea	e investments I estates and 3 Reverse inv	are also de in unlisted co	erned to be ompanies as i	direct inves well as claim	tment. 2 Incl s and liabilitie		than one y	m: original m ear or unlimit nd deposits	aturity up to ted. 8 For m see "Explana	one year. / Lo ore details on tory notes and	the distinction d lists", 9 Los	nai maturity o n between loa ins. borrower	annore re insand li s'note si	espective gro abilities arisin ervice transad	g from credit ctions. 12 Co	terms granted omprises all tv	anatory note and advance pes of equit	es and lists". payments ma ty not record	ide in goods led under di	and rect	
	rights can be a	ttributed to t	he investor; i	ncl. branches a	nd permanent	t establishme	nts. the o	direct investm	ent relationshi	p, i.e. by the	direct investo	nent enterpris	e to the direction of t		loans, asse	ts acquired b	y way of as	signment and	similar. 10 S	ectors classifie	ed into ir	nvestment and	d portfolio inve	estment.					
					2.000 101 110				participat	cer diffe			and the second sec																

Exhibit 9.2 (1b): German International Investment Position.

Source: Deutsche Bundesbank (2025a), pp 6 - 11. [Retrieved April 3, 2025]

Intern Macro / § 2

(2) Official reserve assets as part of external wealth

The following table corresponds to exhibit 2.1.2 (3b) where we focused on transactions that change reserve assets; now, we focus on the stocks themselves. The table shows the various types of reserve assets of the Euro System. (The Euro System is composed of the European Central Bank and the National Central Banks of the countries having adopted the euro.) The reserve assets are part of the external wealth of the Euro System; therefore, they are included in its international investment position as shown in the last column of exhibit 2.2 (3a2).

	Total	1,394.0
•	Monetary gold	
	In EUR billions	869.1
	In fine troy ounces (millions)	346,115
	SDR holdings	191.4
	Reserve position in the IMF	32.3
	Other reserve assets	
	Currency and deposits	
	With monetary authorities, IMF and the BIS	34.2
	With banks	2.7
	 Securities 	
	Equity and investment fund shares	7.5
	 Debt securities 	
	Long-term	206.2
	Short-term	38.0
	Financial derivatives (net)	0.0
	Other claims	12.6
Me	mo items	
	Other foreign currency assets	11.7
	Pre-determined short-term net drains	-25.3

1) Data refer to the changing composition of the euro area, in line with the approach adopted for the reserve assets of the Eurosystem. For further information, see the General Notes.

Exhibit 2.2 (2a): Reserve Assets of the Euro System at the End of 2024. Source: European Central Bank (2025a). [Retrieved April 3, 2025] The reserve assets enable the European Central Bank to intervene in the foreign exchange market.

Only a fraction of the total reserve assets of the Euro System is with the European Central Bank; at the end of 2006, this fraction was 16 %. The bigger part remains in the ownership of national central banks.

When the euro was introduced at the beginning of 1999, monetary policy competence went over to the Euro System. At that point in time, the countries adopting the euro transferred part of their reserve assets to the European Central Bank. It was agreed that the 15 member countries of the European Union should transfer reserve assets in the amount of 50 bn €; however, only 11 countries adopted the euro on January 1st, 1999.

Each euro country had to transfer reserve assets according to its share in the equity of the European Central Bank; for example, the Deutsche Bundesbank transferred 12.25 bn \in , according to its share of 24.5 % (24.5 % out of 50 bn \in = 12.25 bn \in). This transfer had to be made in gold (15 %) and in foreign currency (85 %).

The reserves transferred to the European Central Bank continue to be administered by the national central banks, however in the name and according to the guidance of the European Central Bank. The reserve transfer is mirrored by interest-bearing claims of the national central banks against the European Central Bank.

The following table shows reserve assets as part of the foreign assets of the Deutsche Bundesbank. Reserve assets were already shown as part of Germany's international investment position; see column 26 of exhibit 2.2 (1b). Now we can see its composition of the various types of assets.

	€ million											
	External asset	s										
		Reserve asset	5				Other investme	nt				
End of reporting period	Total	Total	Gold and gold receivables	Special drawing rights	Reserve position in the IMF	Currency, deposits and securities	Total	of which: Clearing accounts within the ESCB 1	Portfolio investment 2	External liabilities 3 4	Net external position 5	
1999 Ian 6	95 316	93 940	29 312	1 598	6.863	56 167	1 376	-	-	9.628	85	688
2005 2006 2007 2008 2009 2010 2011 2012 2013 2014	53,516 130,268 104,389 179,492 230,775 323,286 524,695 714,662 921,002 721,741 678,804	86,181 84,765 99,185 125,541 162,100 184,603 188,630 143,753 158,745	47,924 53,114 62,433 68,194 83,939 115,403 132,874 137,513 94,876 107,475	1,601 1,525 1,469 1,576 13,263 14,104 14,118 13,583 12,837 14,261	2,948 1,486 949 1,709 2,705 4,636 8,178 8,760 7,961 6,364	33,708 28,640 27,694 27,705 25,634 27,957 29,433 28,774 28,080 30,646	43,184 18,696 84,420 129,020 190,288 337,921 475,994 668,672 523,153 473,274	29,886 5,399 71,046 115,650 177,935 325,553 463,311 655,670 510,201 460,846	902 928 2,527 2,570 7,458 24,674 54,065 63,700 54,834 46,784	5,616 115,377 134,697 176,569 237,893 247,645 273,241 333,730 424,999 401,524 396,314	14 - 30 2 - 7 75 251 380 496 320 282	,891 ,308 ,923 ,118 ,641 ,454 ,932 ,003 ,217 ,490
2015 2016 2017 2018 2019 2020 2021 2022 2023	800,709 990,450 1,142,845 1,209,982 1,160,971 1,429,236 1,592,822 1,617,056 1,455,788	159,532 175,765 166,842 173,138 199,295 219,127 261,387 276,488 292,259	105,792 119,253 117,347 121,445 146,562 166,904 173,821 184,036 201,335	15,185 14,938 13,987 14,378 14,642 14,014 46,491 48,567 48,567	5,132 6,581 4,294 5,518 6,051 8,143 8,426 9,480 8,782	33,423 34,993 31,215 31,796 32,039 30,066 32,649 34,404 33,376	596,638 767,128 923,765 980,560 909,645 1,152,757 1,276,150 1,290,317 1,117,978	584,210 754,263 906,941 966,190 895,219 1,136,002 1,260,673 1,269,076 1,093,371	44,539 47,557 52,238 56,284 52,031 57,353 55,285 50,251 45,550	481,787 592,723 668,527 770,519 663,320 781,339 1,009,488 919,441 779,844	318, 397, 474, 439, 497, 583, 647, 675	,921 ,727 ,318 ,462 ,651 ,898 ,334 ,614 ,943
2024	1,464,391	363,705	270,580	50,888	8,267	33,970	1,063,165	1,046,318	37,521	723,234	741	,157

* Assets and liabilities vis-à-vis all countries within and outside the euro area. Up to December 2000 the levels at the end of each quarter are shown, owing to revaluations, at market prices: within each quarter, however, the levels are computed on the basis of cumulative transaction values. From January 2001 all end-of-month levels are valued at market prices. 1 Mainin ynet claims on TARGET2 balances (acc. to the respective country designation), since November 2000 also balances with non-euro area central banks

within the ESCB. 2 Mainly long-term debt securities from issuers within the euro area. 3 including estimates of currency in circulation abroad. 4 See Deutsche Bundesbank, Monthly Report, October 2014, p. 22. 5 Difference between External assets and External liabilities. 6 Euro opening balance sheet of the Bundesbank as at 1 January 1999.

Exhibit 9.2 (2b): External Position of the Deutsche Bundesbank. Source: Deutsche Bundesbank (2025), p. 80*. [Retrieved April 3, 2025]

- (3) Changes of foreign assets and liabilities
- (a) Distinguishing between changes due to transactions and valuation effects

Foreign assets and liabilities change over time, thereby also changing the net foreign assets:

(2.21) $\Delta NA^{f} = \Delta A^{f} - \Delta L^{f}$.

Foreign assets and liabilities do not only change because of transactions (financial flows) between domestic residents and foreigners. Much rather, they also change because of valuation effects: these capital gains or losses can be due to price effects or exchange rate changes.

(2.22)	ΔA ^f	$= \Delta^{\text{trans}} A^{\text{f}}$	+	$\Delta^{val}A^{f}$
		net acquisition of foreign assets		capital gains/losses on foreign assets
(2.23)	ΔL^{f}	= $\Delta^{\text{trans}} L^{\text{f}}$	+	$\Delta^{val}L^{f}$
		net incurrence of foreign liabilities		capital gains/losses on foreign liabilities

We insert (2.22) and (2.23) into (2.21):

 $(2.24) \quad \Delta NA^{f} = (\Delta^{trans}A^{f} - \Delta^{trans}L^{f}) + (\Delta^{val}A^{f} - \Delta^{val}L^{f})$ change in net foreign assets change in net foreign assets due to transactions capital gains/losses on net foreign assets

Defining symbols for both bracketed summands in (2.24), we may re-write the change in net foreign assets (ΔNA^{f}) in the short form (2.27):

- (2.25) $\Delta^{\text{trans}} NA^{\text{f}} = \Delta^{\text{trans}} A^{\text{f}} \Delta^{\text{trans}} L^{\text{f}}$,
- (2.26) $\Delta^{\text{val}} \mathsf{N} \mathsf{A}^{\text{f}} = \Delta^{\text{val}} \mathsf{A}^{\text{f}} \Delta^{\text{val}} \mathsf{L}^{\text{f}}$,
- (2.27) $\Delta NA^{f} = \Delta^{trans}NA^{f} + \Delta^{val}NA^{f}$.

As the bop only registers transactions, it cannot fully show the change in net foreign assets. For the euro area, the European Central Bank complements the changes due to transactions by the "other changes"; the latter are then split up into changes of prices, exchange rates and other adjustments; see exhibit 2.1.2 (3a2).

(b) Bop transactions changing foreign wealth

In terms of the bop, the net incurrence of foreign liabilities is called "capital import" (CIM); see exhibit 2.1.1 (3a) in § 2. The net acquisition of foreign assets is the sum of the net acquisition of reserve assets ($\Delta^{trans}OR$) plus the net acquisition of non-reserve ("other") assets where the latter is called "capital export" (CEX):

(2.30) $\Delta^{\text{trans}} L^{\text{f}} = CIM$,

(2.31) $\Delta^{\text{trans}} A^{\text{f}} = \text{CEX} + \Delta^{\text{trans}} OR$.

We plug these equations into (2.25) to find the relation between the change in net foreign assets due to transactions ($\Delta^{trans} NA^{f}$) and the bop:

(2.32) $\Delta^{\text{trans}} NA^{\text{f}} = CEX + \Delta^{\text{trans}} OR - CIM$.

Using (2.7) - (2.9), we find that the change in net foreign assets due to transactions ($\Delta^{\text{trans}} NA^{\text{f}}$) is just equal to the negative (!) balance on financial account (FA):

(2.7) FA = CFA + OSB , (2.8) CFA = CIM - CEX , (2.9) OSB = - Δ^{trans} OR .

(2.33) $\Delta^{\text{trans}} NA^{\text{f}} = -FA$.

We recall the relations of FA to the fundamental bop equation (2.11). Plugging that equation into (2.33), we find (2.11) 0 = CA + KA + FA

(2.34) $\Delta^{\text{trans}} NA^{\text{f}} = CA + KA$.

Plugging this into (2.27), we find

(2.35)
$$\Delta NA^{f} = CA + KA + \Delta^{val}NA^{f}$$
.

(4) Empirical example: USA 1976 - 2009

The following graph shows the foreign assets and liabilities of the USA as they have evolved since the middle of the 1970s. We realize that liabilities have exceeded assets since the middle of the 1980s.



Exhibit 2.2 (4a): U.S. Foreign Assets and Liabilities, 1976-2019. Source: Krugman/Obstfeld/Melitz (2022), p. 376.

The following graph shows that <u>net</u> foreign assets (ΔNA^{f}) became indeed negative in the middle of the 1980s. According to equation (2.35), the current account is one of the variables explaining this development.

However, equation (2.35) clearly shows that KA and $\Delta^{val}NA^{f}$ also have an influence on the net foreign investment position.



Exhibit 2.2 (4b): U.S. Current Account and Net Foreign Wealth, 1976–2019. Source: Krugman/Obstfeld/Melitz (2022), p. 359.