

Annexes

Annex 1: Detailed tables

A.1.1 Accessibility and clarity

Table A.1.1.1

Average share of observations marked as “free for publication” per dataset (all items)

Percentage of total observations

(July 2019 to June 2021/Q3 2019 to Q2 2021)

Country	Monthly b.o.p.	Quarterly b.o.p.	Quarterly i.i.p.
	All items	All items	All items
Euro area			
BE	98	95	98
DE	94	91	94
EE	93	92	93
IE	0	89	88
GR	91	87	88
ES	77	66	87
FR	94	94	90
IT	98	94	94
CY	0	91	89
LV	100	94	94
LT	93	86	86
LU	46	37	41
MT	93	67	64
NL	98	94	94
AT	0	55	55
PT	85	55	65
SI	98	96	96
SK	93	89	91
FI	98	92	89
Euro area median	93	91	89
Non-euro area			
BG	100	100	100
CZ	92	86	82
DK	100	87	94
HR	95	99	99
HU	99	88	90
PL	93	93	94
RO	96	93	95
SE	90	86	84

Source: ECB.

Note: The percentages are calculated based on the number of observations, without considering the relative importance (magnitude) of the data.

Table A.1.1.2

Clarity of accessibility to b.o.p./i.i.p. data

	Website	Download available	Charts and tables	Press releases	Hotline
Euro area					
BE	Y	Y	Y	N	Y
DE	Y	Y	Y	Y	Y
EE	Y	Y (b.o.p., i.i.p.)	Y (b.o.p., i.i.p.)	Y	Y
IE	Y	Y (b.o.p., i.i.p.)	Y (b.o.p., i.i.p.)	Y	Y
GR	Y	Y	Y	Y	N
ES	Y	Y	Y	Y	Y
FR	Y	Y	Y	Y	Y
IT	Y	Y	Y	Y	Y
CY	Y	Y	Y	Y	N
LV	Y	Y	Y	N	Y
LT	Y	Y	Y	Y	Y
LU	Y (NCB)	Y (NCB)	Y (NCB)	Y (NCB, NSI)	Y (NCB, NSI)
MT	Y	Y	Y	Y	Y
NL	Y	Y	Y	Y	Y
AT	Y	Y	Y	Y	Y
PT	Y	Y	Y	Y	Y
SI	Y	Y	Y	N	N
SK	Y	Y (b.o.p., i.i.p.)	N	N	Y
FI	Y	Y	Y	Y	Y
Euro area data	Y	Y	Y	Y	Y
Non-euro area					
BG	Y (b.o.p., i.i.p.)	Y (b.o.p., i.i.p.)	Y (b.o.p., i.i.p.)	Y	Y
CZ	Y	Y	Y	Y	N
DK	Y	Y	Y	Y	Y
HR	Y	Y	Y	Y	N
HU	Y	Y	Y	Y	Y
PL	Y	Y (b.o.p., i.i.p.)	Y	Y	N
RO	Y	Y	Y	Y	Y
SE	Y	Y	Y	Y	Y

Source: ECB.

A.1.2 Upward revisions ratio

Table A.1.2.1

Upward revisions ratio for the current account (monthly data)

Percentage of revised periods

(April 2018 to March 2021; as a percentage of total revision periods)

	Current account				Goods				Services				Primary income				Secondary income			
	Credit		Debit		Credit		Debit		Credit		Debit		Credit		Debit		Credit		Debit	
	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW
Euro area																				
BE	97	31	-	29	74	11	43	17	94	89	80	77	86	80	-	63	100	100	77	80
DE	14	69	-	69	0	29	0	51	97	100	74	83	66	51	-	20	49	46	46	54
EE	83	97	-	83	57	57	63	66	80	94	74	94	100	91	-	69	83	86	51	51
IE	82	77	-	83	68	43	50	49	85	85	55	45	70	55	-	70	100	100	100	100
GR	42	57	-	59	NA	NA	NA	NA	51	69	61	68	46	46	-	66	NA	NA	100	100
ES	80	86	-	83	60	71	43	60	66	63	41	37	97	97	-	94	60	69	60	49
FR	60	77	-	60	49	57	57	68	77	83	66	71	51	63	-	49	86	77	83	83
IT	40	63	-	51	26	43	43	37	51	54	57	69	57	60	-	54	74	46	69	69
CY	62	51	-	68	59	65	79	86	NA	NA	NA	NA	50	51	-	47	42	NA	30	0
LV	71	26	-	34	66	26	45	29	59	76	68	65	70	68	-	89	68	66	0	13
LT	80	11	-	11	57	0	37	0	71	77	51	51	77	82	-	94	69	83	85	89
LU	100	100	-	100	86	77	77	86	57	89	60	91	100	97	-	100	83	63	83	69
MT	29	77	-	83	71	71	77	89	31	63	89	86	26	51	-	66	71	69	63	63
NL	97	31	-	31	100	29	37	3	71	60	23	46	100	100	-	91	26	43	83	82
AT	86	46	-	50	54	17	43	14	83	69	77	74	89	74	-	63	62	63	66	60
PT	94	88	-	74	23	11	21	49	88	74	79	66	82	74	-	83	83	100	97	84
SI	49	6	-	20	43	0	51	9	69	77	89	91	51	69	-	43	77	97	100	100
SK	63	46	-	43	31	9	46	14	71	77	69	63	71	83	-	71	83	89	94	94
FI	66	83	-	79	69	77	74	91	38	69	74	83	69	63	-	59	57	80	69	74
Euro area median	71	63	-	60	58	36	45	49	71	76	68	70	70	69	-	66	73	77	77	74
Euro area	100	-	83	-	26	-	9	-	83	-	89	-	100	-	89	-	74	-	83	-
Non-euro area																				
BG	-	100	-	100	-	17	-	77	-	100	-	86	-	26	-	100	-	100	-	86
CZ	-	86	-	69	-	51	-	66	-	77	-	71	-	80	-	71	-	89	-	71
DK	-	91	-	91	-	40	-	91	-	86	-	83	-	89	-	77	-	71	-	54
HR	-	77	-	43	-	60	-	60	-	57	-	54	-	80	-	54	-	77	-	83
HU	-	83	-	86	-	63	-	89	-	100	-	94	-	60	-	40	-	69	-	91
PL	-	89	-	91	-	89	-	89	-	71	-	66	-	91	-	91	-	77	-	97
RO	-	91	-	94	-	63	-	100	-	77	-	83	-	97	-	71	-	86	-	97
SE	-	77	-	63	-	94	-	69	-	54	-	49	-	97	-	86	-	23	-	29

Source: ECB.

Notes: Extra EA: Extra euro area.

Table A.1.2.2

Upward revisions ratio for the current account (quarterly data)

Percentage of revised periods

(Q2 2018 to Q1 2021; as a percentage of total revision periods)

	Current account				Goods				Services				Primary income				Secondary income			
	Credit		Debit		Credit		Debit		Credit		Debit		Credit		Debit		Credit		Debit	
	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW
Euro area																				
BE	92	25	-	25	67	0	50	0	92	92	83	75	83	67	-	50	100	100	75	83
DE	50	67	-	42	17	17	83	25	100	100	64	73	60	60	-	0	50	40	50	60
EE	100	100	-	100	75	75	92	75	92	92	75	83	92	100	-	83	75	75	67	83
IE	100	100	-	92	64	73	73	82	100	100	100	100	82	91	-	100	64	91	9	64
GR	42	42	-	50	NA	NA	NA	NA	NA	NA	NA	NA	42	42	-	50	NA	NA	NA	NA
ES	92	100	-	100	67	75	8	75	67	67	50	50	92	92	-	100	67	82	67	75
FR	67	83	-	92	75	75	67	58	92	92	58	83	33	42	-	75	92	92	92	92
IT	25	50	-	58	17	27	17	0	50	58	45	42	67	58	-	58	92	75	55	55
CY	92	92	-	92	92	50	55	42	100	100	100	100	92	92	-	92	67	73	43	38
LV	75	25	-	33	100	33	67	33	0	50	64	67	67	67	-	83	80	80	0	10
LT	58	0	-	0	25	0	25	0	50	58	42	50	75	75	-	83	83	92	70	64
LU	100	100	-	100	83	83	100	92	50	83	75	100	100	100	-	100	75	67	83	58
MT	33	58	-	92	92	92	67	100	25	50	83	75	17	50	-	42	83	75	67	75
NL	67	33	-	25	25	17	75	8	58	67	42	67	75	50	-	55	25	33	67	67
AT	83	8	-	42	8	0	58	33	92	92	75	92	83	67	-	83	73	80	100	75
PT	100	100	-	83	17	0	17	58	100	83	75	58	75	75	-	92	92	100	90	73
SI	58	0	-	25	50	0	58	0	83	83	92	100	75	92	-	58	75	92	92	92
SK	42	0	-	50	8	0	25	8	92	92	92	83	83	92	-	75	92	100	100	100
FI	50	67	-	58	67	92	67	92	33	42	50	83	67	67	-	42	55	58	58	50
Euro area median	67	58	-	58	65	30	63	38	88	83	75	79	75	67	-	75	75	80	67	70
Euro area	92	-	92	-	8	-	42	-	100	-	92	-	92	-	92	-	58	-	75	-
Non-euro area																				
BG	-	100	-	100	-	100	-	100	-	100	-	50	-	33	-	100	-	100	-	75
CZ	-	75	-	58	-	55	-	73	-	55	-	73	-	83	-	50	-	91	-	45
DK	-	100	-	92	-	42	-	92	-	92	-	92	-	100	-	75	-	67	-	58
HR	-	92	-	92	-	92	-	100	-	75	-	100	-	100	-	8	-	50	-	100
HU	-	75	-	75	-	50	-	83	-	83	-	92	-	58	-	50	-	58	-	100
PL	-	100	-	100	-	100	-	100	-	33	-	42	-	100	-	100	-	100	-	92
RO	-	100	-	92	-	17	-	92	-	67	-	75	-	100	-	83	-	92	-	100
SE	-	100	-	100	-	92	-	83	-	50	-	92	-	92	-	92	-	75	-	67

Source: ECB.

Table A.1.2.3

Upward revisions ratio for the international investment position (quarterly data)

Percentage of revised periods

(Q2 2018 to Q1 2021; as a percentage of total revision periods)

	Financial account				Direct investment				Portfolio investment				Other investment			
	Assets		Liabilities		Assets		Liabilities		Assets		Liabilities		Assets		Liabilities	
	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW
Euro area																
BE	67	75	-	75	83	83	50	42	83	100	-	42	8	8	75	67
DE	58	82	-	100	67	92	55	45	1	1	-	70	75	83	100	80
EE	92	83	-	92	92	83	67	67	50	42	-	50	67	75	50	42
IE	83	90	-	100	83	92	50	67	36	36	-	42	67	67	42	25
GR	33	55	-	64	33	17	42	42	NA	NA	-	NA	100	89	NA	75
ES	75	82	-	100	67	67	75	83	83	67	-	33	83	92	33	58
FR	75	64	-	82	8	0	25	42	50	58	-	33	75	67	50	58
IT	75	73	-	73	58	75	75	67	50	58	-	83	75	67	75	50
CY	83	100	-	100	58	100	58	83	0	17	-	92	100	100	33	50
LV	100	100	-	91	83	83	92	75	67	100	-	43	100	100	50	42
LT	100	100	-	100	100	100	67	75	83	100	-	NA	42	50	67	75
LU	92	92	-	92	92	92	42	33	83	83	-	100	58	92	67	67
MT	33	42	-	42	33	42	25	33	42	50	-	67	33	17	33	25
NL	67	64	-	64	75	100	50	58	58	92	-	58	8	25	67	58
AT	58	64	-	73	58	58	42	50	45	83	-	36	83	92	67	58
PT	58	67	-	92	67	67	42	67	17	33	-	33	100	100	67	58
SI	75	67	-	50	83	100	58	58	33	50	-	92	58	33	67	25
SK	75	83	-	83	75	75	25	42	50	58	-	17	83	100	50	67
FI	58	64	-	73	50	58	33	42	67	92	-	33	83	100	83	75
Euro area median	75	75	-	83	67	83	50	58	50	58	-	43	75	83	67	58
Euro area	83	-	100	-	83	-	42	-	50	-	75	-	75	-	42	-
Non-euro area																
BG	-	100	-	92	-	92	-	75	-	83	-	42	-	100	-	42
CZ	-	75	-	58	-	64	-	55	-	NA	-	NA	-	25	-	18
DK	-	100	-	92	-	100	-	58	-	58	-	25	-	67	-	58
HR	-	100	-	100	-	75	-	50	-	100	-	55	-	100	-	58
HU	-	100	-	100	-	100	-	83	-	83	-	58	-	83	-	92
PL	-	83	-	92	-	92	-	100	-	75	-	58	-	83	-	83
RO	-	100	-	92	-	92	-	83	-	75	-	67	-	92	-	58
SE	-	58	-	100	-	92	-	50	-	33	-	40	-	8	-	25

Source: ECB.

A.1.3 Directional reliability indicator

Table A.1.3.1

Directional reliability indicator for the current account (monthly data)

Percentage of revised periods

(April 2018 to March 2021; as a percentage of total revision periods)

	Current account				Goods				Services				Primary income				Secondary income			
	Credit		Debit		Credit		Debit		Credit		Debit		Credit		Debit		Credit		Debit	
	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW
Euro area																				
BE	86	89	-	94	86	86	91	86	80	80	77	89	51	66	-	77	77	77	74	74
DE	97	97	-	91	100	97	89	100	94	91	94	97	77	86	-	94	94	100	97	97
EE	89	89	-	94	89	89	86	94	89	89	86	91	63	60	-	63	77	77	83	86
IE	95	91	-	91	91	89	86	94	95	95	90	90	85	90	-	90	80	80	100	95
GR	97	100	-	91	NA	NA	NA	NA	97	100	97	97	94	100	-	97	NA	NA	97	94
ES	91	91	-	86	89	94	83	91	94	94	82	86	89	86	-	83	69	86	83	91
FR	89	97	-	94	97	94	97	100	83	91	83	86	80	83	-	89	71	83	91	89
IT	100	100	-	100	97	97	89	91	91	97	91	97	86	86	-	100	83	94	80	80
CY	97	97	-	91	79	71	91	97	NA	NA	NA	NA	88	83	-	91	84	NA	75	1
LV	86	80	-	94	97	86	90	88	59	76	71	82	52	62	-	77	74	69	1	87
LT	97	91	-	89	94	97	94	89	66	86	83	89	89	94	-	66	89	89	82	91
LU	71	86	-	89	66	77	69	74	83	74	77	80	74	80	-	80	66	80	66	63
MT	54	60	-	83	57	60	89	74	69	74	69	66	97	83	-	66	37	40	46	40
NL	86	77	-	83	89	80	97	91	74	71	77	69	80	86	-	86	89	83	77	76
AT	80	89	-	79	83	83	83	89	86	83	89	89	80	94	-	80	71	71	54	54
PT	94	94	-	100	94	100	100	100	91	100	85	97	91	100	-	94	91	74	93	90
SI	94	100	-	89	97	91	94	94	97	91	97	91	83	89	-	66	86	91	100	94
SK	94	94	-	94	100	97	97	97	66	74	63	57	63	71	-	71	74	71	77	74
FI	66	74	-	76	94	94	97	89	65	63	71	66	60	57	-	65	54	49	49	49
Euro area median	91	91	-	91	93	90	91	91	84	87	83	89	80	86	-	80	77	80	80	86
Euro area	100	-	83	-	100	-	100	-	91	-	94	-	89	-	91	-	86	-	91	-
Non-euro area																				
BG	-	94	-	80	-	94	-	91	-	86	-	89	-	83	-	66	-	100	-	91
CZ	-	97	-	86	-	100	-	97	-	69	-	69	-	71	-	83	-	100	-	86
DK	-	83	-	76	-	93	-	86	-	86	-	87	-	79	-	104	-	90	-	69
HR	-	91	-	67	-	76	-	74	-	86	-	73	-	65	-	74	-	61	-	67
HU	-	80	-	86	-	89	-	100	-	63	-	54	-	54	-	66	-	63	-	83
PL	-	89	-	86	-	97	-	91	-	74	-	83	-	91	-	60	-	91	-	89
RO	-	94	-	89	-	97	-	97	-	69	-	80	-	86	-	69	-	91	-	91
SE	-	87	-	94	-	100	-	97	-	65	-	58	-	87	-	85	-	52	-	61

Source: ECB.

Table A.1.3.2

Directional reliability indicator for the current account (quarterly data)

Percentage of revised periods

(Q2 2018 to Q1 2021; as a percentage of total revision periods)

	Current account				Goods				Services				Primary income				Secondary income			
	Credit		Debit		Credit		Debit		Credit		Debit		Credit		Debit		Credit		Debit	
	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW
Euro area																				
BE	91	91	-	91	91	100	82	82	91	91	82	100	36	73	-	100	82	91	45	73
DE	100	82	-	100	91	91	91	100	100	100	100	100	78	100	-	89	67	89	89	100
EE	100	91	-	100	91	91	100	100	100	100	82	100	64	73	-	82	82	82	100	82
IE	100	91	-	100	80	90	70	100	100	90	100	100	90	70	-	80	80	90	100	100
GR	100	100	-	100	NA	NA	NA	NA	NA	NA	NA	NA	91	91	-	91	NA	NA	NA	NA
ES	100	100	-	91	100	100	100	100	100	100	82	91	100	100	-	91	91	70	100	91
FR	100	100	-	91	91	100	100	100	91	100	91	82	91	91	-	100	91	100	91	91
IT	100	100	-	100	100	100	100	100	100	100	100	100	100	91	-	100	100	100	100	100
CY	82	73	-	82	73	82	100	100	91	91	82	82	82	64	-	64	91	90	100	88
LV	91	100	-	82	100	91	100	100	100	100	70	100	82	82	-	100	44	60	90	100
LT	100	100	-	100	100	100	100	91	100	91	91	91	91	73	-	100	100	100	100	100
LU	64	73	-	73	64	45	100	91	64	100	73	73	73	64	-	73	45	64	100	100
MT	73	82	-	73	82	91	91	73	91	82	55	73	100	55	-	55	64	55	73	64
NL	82	91	-	91	100	73	100	82	82	100	55	91	82	55	-	70	91	91	91	100
AT	100	100	-	91	82	91	100	91	100	100	100	100	100	82	-	91	80	100	100	100
PT	82	100	-	100	91	100	100	91	100	100	82	91	100	100	-	91	73	82	89	100
SI	100	91	-	82	100	100	91	91	91	100	100	91	73	82	-	73	100	82	91	100
SK	100	100	-	100	100	91	91	100	100	100	91	100	82	91	-	64	100	100	100	100
FI	100	91	-	91	100	82	82	91	91	91	73	100	64	82	-	100	70	73	82	82
Euro area median	100	91	-	91	91	91	100	95	100	100	82	95	82	82	-	91	82	89	95	100
Euro area	91	-	100	-	91	-	100	-	91	-	100	-	91	-	73	-	100	-	100	-
Non-euro area																				
BG	-	100	-	82	-	91	-	91	-	100	-	91	-	91	-	73	-	100	-	73
CZ	-	100	-	100	-	100	-	100	-	80	-	100	-	82	-	91	-	100	-	90
DK	-	91	-	91	-	91	-	82	-	91	-	91	-	91	-	91	-	91	-	100
HR	-	100	-	91	-	100	-	100	-	91	-	100	-	45	-	91	-	100	-	91
HU	-	91	-	91	-	91	-	100	-	100	-	100	-	73	-	82	-	73	-	100
PL	-	82	-	100	-	73	-	91	-	100	-	91	-	82	-	82	-	82	-	100
RO	-	91	-	82	-	100	-	91	-	100	-	100	-	82	-	82	-	100	-	91
SE	-	82	-	100	-	82	-	100	-	82	-	91	-	100	-	91	-	100	-	91

Source: ECB.

Table A.1.3.3

Directional reliability indicator for the international investment position (quarterly data)

Percentage of revised periods

(Q2 2018 to Q1 2021; as a percentage of total revision periods)

	Financial account				Direct investment				Portfolio investment				Other investment			
	Assets		Liabilities		Assets		Liabilities		Assets		Liabilities		Assets		Liabilities	
	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW
Euro area																
BE	91	91	-	73	64	64	100	73	100	100	-	91	82	82	91	91
DE	100	100	-	80	90	90	80	80	89	100	-	89	100	100	100	100
EE	100	100	-	91	91	91	91	91	100	91	-	100	91	100	100	100
IE	100	100	-	82	55	82	91	82	90	90	-	100	91	82	73	82
GR	100	100	-	100	100	91	91	100	NA	NA	-	NA	NA	NA	NA	1
ES	91	91	-	73	82	91	91	73	100	100	-	100	100	100	100	91
FR	100	100	-	100	73	64	82	100	73	73	-	91	91	91	100	100
IT	91	82	-	91	82	100	100	91	91	100	-	100	100	100	82	100
CY	45	73	-	64	73	73	73	64	91	91	-	100	82	82	91	91
LV	100	100	-	91	100	64	82	91	100	100	-	100	100	100	91	100
LT	82	100	-	73	45	55	82	73	91	100	-	NA	90	100	100	100
LU	91	82	-	82	91	64	100	82	100	100	-	82	82	91	91	100
MT	100	91	-	64	82	64	91	64	100	100	-	91	100	100	91	100
NL	82	91	-	91	73	91	73	91	82	91	-	91	100	100	100	91
AT	100	100	-	73	100	91	64	73	100	100	-	100	100	100	91	91
PT	82	82	-	64	64	82	55	64	100	73	-	100	100	100	91	100
SI	100	100	-	73	64	91	73	73	100	91	-	100	91	100	100	100
SK	91	90	-	91	100	73	100	91	100	91	-	100	100	91	100	100
FI	91	100	-	91	73	100	82	91	100	91	-	91	91	100	100	100
Euro area median	91	100	-	82	82	82	82	82	100	95	-	100	95	100	95	100
Euro area	82	-	73	-	82	-	73	-	100	-	100	-	91	-	100	-
Non-euro area																
BG	-	100	-	64	-	100	-	64	-	91	-	91	-	100	-	82
CZ	-	80	-	80	-	80	-	80	-	100	-	NA	-	100	-	100
DK	-	73	-	64	-	73	-	64	-	82	-	100	-	100	-	100
HR	-	82	-	82	-	82	-	82	-	90	-	100	-	91	-	91
HU	-	64	-	64	-	64	-	64	-	100	-	100	-	100	-	100
PL	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100
RO	-	90	-	100	-	90	-	100	-	100	-	100	-	91	-	73
SE	-	82	-	82	-	82	-	82	-	100	-	100	-	100	-	100

Source: ECB.

A.1.4 Symmetric mean absolute percentage error

Table A.1.4.1

Symmetric mean absolute percentage error for the current account (monthly data)

As a percentage of average underlying first and last assessments

(April 2018 to March 2021)

	Current account				Goods				Services				Primary income				Secondary income			
	Credit		Debit		Credit		Debit		Credit		Debit		Credit		Debit		Credit		Debit	
	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW
Euro area																				
BE	3	6	-	7	1	11	2	11	6	4	6	4	14	10	-	9	19	17	7	5
DE	1	1	-	0	2	0	1	0	2	2	2	2	4	4	-	3	4	2	2	1
EE	2	2	-	2	1	1	1	0	4	3	6	4	14	9	-	8	11	9	7	4
IE	2	4	-	7	3	3	2	4	3	2	7	6	3	2	-	3	8	13	13	16
GR	1	1	-	1	0	0	0	0	2	1	3	2	2	1	-	2	0	0	0	0
ES	2	2	-	1	1	1	2	1	3	2	2	2	9	9	-	6	8	6	2	3
FR	2	2	-	2	1	1	1	0	2	3	3	3	7	7	-	8	13	12	5	5
IT	1	1	-	1	1	1	1	1	3	2	3	2	5	6	-	6	6	4	8	7
CY	32	31	-	29	6	8	5	3	15	16	20	18	53	53	-	52	14	11	15	10
LV	3	4	-	3	2	5	1	4	4	2	5	3	23	16	-	19	10	8	8	11
LT	2	2	-	2	0	5	1	4	6	5	6	5	28	22	-	17	5	5	5	5
LU	11	10	-	10	13	8	10	4	2	3	3	4	14	14	-	13	13	5	9	5
MT	4	2	-	2	16	11	5	5	7	3	7	4	0	1	-	2	5	23	8	12
NL	5	5	-	5	1	8	1	10	10	7	6	6	11	8	-	9	17	10	13	11
AT	2	1	-	2	2	2	3	2	3	2	3	3	10	8	-	10	4	3	8	6
PT	2	1	-	1	0	1	1	1	3	2	2	2	6	5	-	4	6	6	1	2
SI	1	5	-	5	1	7	2	7	2	1	4	4	6	6	-	11	4	6	3	5
SK	1	1	-	1	1	2	1	1	5	4	3	3	14	9	-	3	27	25	15	12
FI	3	2	-	2	1	1	1	1	5	4	2	3	11	10	-	9	16	15	10	10
Euro area median	2	2	-	2	1	2	1	2	3	3	3	3	10	8	-	8	8	8	8	5
Euro area	2	-	3	-	1	-	1	-	3	-	6	-	8	-	7	-	3	-	3	-
Non-euro area																				
BG	-	2	-	5	-	1	-	2	-	9	-	5	-	6	-	48	-	7	-	21
CZ	-	1	-	1	-	0	-	1	-	4	-	6	-	6	-	8	-	4	-	2
DK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HU	-	2	-	3	-	1	-	1	-	6	-	8	-	11	-	10	-	13	-	6
PL	-	1	-	2	-	1	-	1	-	3	-	3	-	5	-	10	-	6	-	6
RO	-	2	-	2	-	1	-	0	-	5	-	5	-	15	-	14	-	4	-	12
SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: ECB.

Table A.1.4.2

Symmetric mean absolute percentage error for the current account (quarterly data)

As a percentage of average underlying first and last assessments

(Q2 2018 to Q1 2021; as a percentage of average underlying first and last assessments)

	Current account				Goods				Services				Primary income				Secondary income			
	Credit		Debit		Credit		Debit		Credit		Debit		Credit		Debit		Credit		Debit	
	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW
Euro area																				
BE	2	7	-	7	1	12	1	13	4	2	3	2	10	8	-	8	6	6	5	4
DE	0	0	-	0	1	0	0	0	1	1	1	1	2	3	-	3	2	1	1	1
EE	1	1	-	1	1	1	0	0	2	2	2	1	10	5	-	3	4	4	0	1
IE	2	2	-	5	1	1	2	1	3	3	9	7	5	4	-	3	4	3	2	3
GR	0	0	-	0	0	0	0	0	0	0	0	0	2	1	-	2	0	0	0	0
ES	1	1	-	1	0	1	0	0	1	1	1	1	6	6	-	6	4	4	2	2
FR	1	1	-	1	1	0	0	0	2	2	2	2	3	3	-	3	4	5	2	2
IT	0	0	-	1	0	0	0	0	1	1	1	0	3	4	-	6	2	1	1	1
CY	20	19	-	17	3	2	1	1	10	10	15	12	35	34	-	31	4	3	2	1
LV	2	3	-	3	1	5	0	4	1	0	3	1	19	14	-	3	6	5	7	9
LT	1	3	-	3	0	5	1	4	1	1	1	1	25	20	-	6	3	3	1	2
LU	9	8	-	8	9	7	6	2	2	3	3	4	11	11	-	10	14	6	9	4
MT	4	1	-	1	5	4	3	4	7	1	5	2	0	1	-	1	3	2	6	3
NL	1	6	-	6	1	9	0	10	4	2	3	2	3	3	-	2	6	2	2	3
AT	1	1	-	1	1	2	0	2	2	1	2	2	7	5	-	7	1	1	0	0
PT	1	1	-	1	0	0	1	1	2	2	1	1	5	4	-	3	4	4	1	2
SI	1	5	-	6	1	7	1	8	1	1	3	3	5	5	-	9	4	6	2	5
SK	0	1	-	0	1	2	1	1	1	1	1	1	5	4	-	3	11	12	11	9
FI	1	1	-	1	1	0	1	1	2	1	1	1	2	4	-	4	5	5	7	7
Euro area median	1	1	-	1	1	2	1	1	2	1	2	1	5	4	-	3	4	4	2	2
Euro area	1	-	2	-	0	-	0	-	2	-	3	-	4	-	4	-	2	-	1	-
Non-euro area																				
BG	-	1	-	4	-	0	-	2	-	5	-	2	-	5	-	24	-	4	-	19
CZ	-	0	-	0	-	0	-	0	-	0	-	0	-	2	-	2	-	2	-	2
DK	-	2	-	2	-	1	-	1	-	6	-	4	-	3	-	2	-	3	-	1
HR	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0
HU	-	1	-	2	-	0	-	0	-	1	-	2	-	9	-	9	-	6	-	3
PL	-	1	-	1	-	1	-	1	-	1	-	1	-	5	-	4	-	1	-	1
RO	-	1	-	1	-	0	-	0	-	1	-	2	-	11	-	3	-	1	-	9
SE	-	1	-	1	-	1	-	0	-	1	-	1	-	4	-	4	-	3	-	1

Source: ECB.

Table A.1.4.3

Symmetric mean absolute percentage error for the international investment position (quarterly data)

As a percentage of average underlying first and last assessments

(Q2 2018 to Q1 2021)

	Financial account				Direct investment				Portfolio investment				Other investment			
	Assets		Liabilities		Assets		Liabilities		Assets		Liabilities		Assets		Liabilities	
	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW
Euro area																
BE	1	0	-	1	3	2	3	4	0	0	-	0	3	2	3	1
DE	0	0	-	2	1	1	2	1	0	0	-	6	0	0	0	0
EE	0	0	-	1	1	0	1	1	0	0	-	0	1	0	1	1
IE	1	0	-	1	2	1	3	4	0	0	-	0	1	1	1	1
GR	1	0	-	1	5	3	1	3	0	0	-	0	0	2	1	1
ES	1	0	-	0	1	1	3	2	0	0	-	0	1	1	1	0
FR	1	0	-	0	2	2	1	1	1	0	-	1	3	2	1	1
IT	0	0	-	0	0	1	3	1	0	0	-	0	2	1	1	0
CY	8	7	-	7	8	9	10	8	3	2	-	4	9	4	10	7
LV	2	1	-	0	4	3	0	0	0	0	-	0	6	3	1	0
LT	7	3	-	3	23	15	2	7	2	0	-	0	1	0	1	0
LU	1	0	-	0	1	1	1	1	0	0	-	0	1	1	4	2
MT	1	0	-	0	1	1	1	1	0	0	-	1	3	2	2	1
NL	1	0	-	0	2	1	2	1	0	0	-	1	1	1	1	1
AT	1	0	-	0	2	1	8	3	0	0	-	0	1	1	2	2
PT	1	1	-	0	3	1	1	1	2	1	-	0	2	1	1	1
SI	2	1	-	1	2	2	2	1	1	1	-	0	3	2	1	1
SK	1	1	-	0	3	3	1	1	0	0	-	0	1	1	0	0
FI	0	1	-	0	2	3	2	2	0	0	-	0	0	1	2	2
Euro area median	1	0	-	0	2	1	2	1	0	0	-	0	1	1	1	1
Euro area	1	-	1	-	1	-	1	-	0	-	2	-	1	-	1	-
Non-euro area																
BG	-	1	-	1	-	3	-	1	-	0	-	0	-	1	-	0
CZ	-	1	-	1	-	2	-	1	-	0	-	0	-	1	-	0
DK	-	1	-	1	-	3	-	3	-	0	-	0	-	0	-	0
HR	-	6	-	3	-	40	-	8	-	2	-	2	-	7	-	4
HU	-	6	-	6	-	8	-	7	-	0	-	0	-	1	-	1
PL	-	0	-	0	-	1	-	1	-	0	-	0	-	1	-	0
RO	-	1	-	0	-	2	-	0	-	0	-	0	-	1	-	0
SE	-	1	-	1	-	2	-	2	-	1	-	0	-	1	-	1

Source: ECB.

A.1.5 Mean absolute comparative error

Table A.1.5.1

Mean absolute comparative error for the financial account (monthly data)

As a percentage of average underlying first and last assessments for the related positions

(April 2018 to March 2021)

	Financial account				Direct investment				Portfolio investment				Other investment			
	Assets		Liabilities		Assets		Liabilities		Assets		Liabilities		Assets		Liabilities	
	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW
Euro area																
BE	2.3	0.9	-	0.9	3.9	2.1	3.2	1.5	1.5	0.6	-	0.5	4.1	2.2	5.1	2.1
DE	0.2	0.2	-	0.2	0.8	0.6	1.6	0.9	0.4	0.3	-	0.4	0.4	0.2	0.3	0.3
EE	1.6	1.1	-	0.9	4.4	1.7	1.6	1.4	0.8	0.6	-	1.3	4.5	2.4	1.7	0.9
IE	0.5	0.3	-	0.4	2.1	1.3	3.3	1.1	0.5	0.5	-	0.5	1.1	1.1	1.4	1.1
GR	0.2	0.5	-	0.2	0.6	0.2	0.3	0.2	0.0	0.0	-	0.2	0.5	1.5	1.4	0.3
ES	0.6	0.4	-	0.3	0.9	0.9	1.6	0.6	0.5	0.3	-	0.6	2.1	0.8	1.1	0.4
FR	0.9	0.8	-	0.9	1.3	0.7	1.5	0.9	2.0	1.3	-	1.7	2.0	1.9	1.8	1.7
IT	0.5	0.3	-	0.3	1.4	1.1	1.4	1.1	0.3	0.3	-	0.2	1.0	0.6	2.1	0.3
CY	1.1	1.3	-	1.2	1.2	1.2	0.9	1.1	5.7	3.4	-	3.7	4.3	2.7	2.0	1.8
LV	1.4	0.7	-	0.5	3.5	2.3	2.4	0.9	0.2	0.2	-	0.2	5.1	1.8	1.3	0.8
LT	4.3	1.8	-	1.5	12.0	7.4	2.8	3.4	1.1	0.3	-	0.1	5.7	2.5	1.8	1.4
LU	1.1	0.8	-	0.8	2.4	1.6	2.3	2.0	0.6	0.5	-	0.7	3.8	3.1	3.1	1.7
MT	0.2	0.2	-	0.2	0.1	0.1	0.1	0.1	0.0	0.0	-	0.2	1.0	0.6	1.3	0.9
NL	1.4	0.9	-	1.0	1.9	1.4	1.8	1.6	1.4	1.0	-	1.0	1.6	1.4	2.2	1.7
AT	2.0	1.1	-	1.0	4.6	3.3	7.0	3.8	0.3	0.1	-	0.2	1.1	0.7	2.2	1.5
PT	1.3	0.5	-	0.3	1.4	0.9	1.0	0.6	1.2	0.4	-	0.4	1.7	0.9	1.0	0.6
SI	0.4	0.3	-	0.5	1.0	1.1	1.6	1.0	0.1	0.1	-	0.3	0.7	0.5	1.1	0.7
SK	0.9	1.2	-	0.7	2.8	6.6	1.6	1.6	0.5	0.3	-	0.4	2.6	1.8	0.5	0.4
FI	1.5	0.9	-	1.1	3.3	1.8	5.9	4.6	1.1	0.6	-	1.1	3.9	2.4	3.5	3.0
Euro area median	1.1	0.8	-	0.7	1.9	1.3	1.6	1.1	0.5	0.3	-	0.4	2.0	1.5	1.7	0.9
Euro area	0.4	-	0.4	-	1.2	-	1.0	-	0.5	-	0.6	-	1.1	-	1.0	-
Non-euro area																
BG	-	0.5	-	0.7	-	2.5	-	1.0	-	0.6	-	1.0	-	1.6	-	1.9
CZ	-	0.4	-	0.4	-	0.9	-	0.4	-	0.8	-	1.7	-	1.5	-	1.4
DK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HU	-	7.3	-	6.2	-	9.3	-	7.8	-	0.3	-	0.0	-	1.9	-	1.7
PL	-	0.5	-	0.8	-	1.3	-	1.3	-	0.4	-	0.3	-	1.9	-	0.7
RO	-	1.2	-	0.8	-	4.8	-	1.1	-	0.4	-	0.4	-	2.6	-	1.9
SE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: ECB.

Table A.1.5.2**Mean absolute comparative error for the financial account (quarterly data)**

As a percentage of average underlying first and last assessments for the related positions

(Q2 2018 to Q1 2021)

	Financial account				Direct investment				Portfolio investment				Other investment			
	Assets		Liabilities		Assets		Liabilities		Assets		Liabilities		Assets		Liabilities	
	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW
Euro area																
BE	0.8	0.4	-	0.5	1.8	0.9	0.6	0.9	0.2	0.1	-	0.1	2.3	1.5	1.4	1.4
DE	0.2	0.1	-	0.2	0.5	0.3	0.8	0.5	0.1	0.1	-	0.3	0.3	0.1	0.1	0.3
EE	0.5	0.3	-	0.2	0.9	0.2	0.2	0.2	0.2	0.2	-	0.1	1.9	0.9	0.4	0.3
IE	0.3	0.3	-	0.3	1.2	0.6	2.0	1.2	0.2	0.2	-	0.2	0.5	0.6	0.9	0.8
GR	0.1	0.3	-	0.2	0.5	0.2	0.3	0.2	0.0	0.0	-	0.1	0.0	0.9	0.3	0.2
ES	0.3	0.3	-	0.1	0.6	0.6	0.3	0.4	0.2	0.2	-	0.2	0.7	0.3	0.4	0.2
FR	0.4	0.2	-	0.2	0.8	0.3	0.9	0.4	0.7	0.3	-	0.3	0.5	0.6	0.3	0.4
IT	0.2	0.1	-	0.1	0.5	0.4	0.7	0.4	0.1	0.1	-	0.1	0.4	0.2	0.7	0.1
CY	0.6	0.9	-	0.8	0.8	0.9	0.5	0.8	2.9	1.7	-	2.3	1.9	1.2	1.2	1.2
LV	0.6	0.4	-	0.1	1.1	0.9	0.5	0.3	0.0	0.0	-	0.1	2.3	0.9	0.2	0.2
LT	2.6	1.2	-	0.9	8.1	5.0	0.7	2.0	0.6	0.1	-	0.0	0.8	0.6	0.5	0.2
LU	0.4	0.3	-	0.3	0.8	0.8	0.9	1.0	0.2	0.2	-	0.2	1.4	0.9	1.1	0.5
MT	0.1	0.1	-	0.1	0.2	0.2	0.1	0.1	0.0	0.0	-	0.1	0.3	0.2	0.2	0.2
NL	0.7	0.5	-	0.5	1.0	0.8	0.9	1.1	0.2	0.2	-	0.4	0.7	0.1	0.6	0.4
AT	1.4	0.7	-	0.7	3.3	2.0	5.2	2.9	0.1	0.1	-	0.1	0.6	0.4	0.9	0.7
PT	0.9	0.3	-	0.2	0.5	0.5	0.4	0.3	0.9	0.3	-	0.2	1.1	0.5	0.5	0.3
SI	0.3	0.2	-	0.3	0.8	0.7	1.2	0.7	0.1	0.1	-	0.0	0.4	0.3	0.3	0.6
SK	0.2	0.4	-	0.1	0.3	2.2	0.4	0.2	0.1	0.0	-	0.1	0.7	0.4	0.0	0.1
FI	0.4	0.3	-	0.5	1.0	0.6	1.8	1.3	0.3	0.2	-	0.2	1.4	1.0	1.3	1.2
Euro area median	0.4	0.3	-	0.2	0.8	0.6	0.7	0.5	0.2	0.1	-	0.1	0.7	0.6	0.5	0.3
Euro area	0.2	-	0.2	-	0.5	-	0.5	-	0.1	-	0.2	-	0.2	-	0.3	-
Non-euro area																
BG	-	0.3	-	0.6	-	0.5	-	0.7	-	0.2	-	0.4	-	1.1	-	0.7
CZ	-	0.1	-	0.1	-	0.4	-	0.2	-	0.3	-	0.0	-	0.3	-	0.4
DK	-	0.2	-	0.2	-	0.8	-	1.3	-	0.2	-	0.2	-	0.3	-	0.2
HR	-	0.6	-	0.4	-	1.1	-	0.8	-	0.5	-	0.7	-	3.0	-	1.2
HU	-	3.7	-	3.1	-	4.6	-	3.9	-	0.2	-	0.0	-	0.9	-	0.7
PL	-	0.2	-	0.3	-	0.6	-	0.5	-	0.1	-	0.1	-	0.6	-	0.3
RO	-	0.4	-	0.2	-	1.4	-	0.2	-	0.2	-	0.1	-	0.9	-	0.8
SE	-	0.2	-	0.2	-	0.4	-	0.7	-	0.0	-	0.1	-	0.2	-	0.1

Source: ECB.

A.1.6 Net relative revisions

Table A.1.6.1

Net relative revisions (monthly data) – counterpart area rest of the world

Current account revisions as a percentage of current account items; financial account positions as a percentage of underlying positions

(April 2018 to March 2021)

	Current account				Financial account				
	Goods	Services	Primary income	Secondary income	Direct investment	Portfolio investment	Other investment		
Euro area									
BE	3	3	6	10	12	0.3	1.6	0.8	2.6
DE	1	1	2	10	2	0.3	0.9	0.5	0.4
EE	3	2	5	14	20	0.5	1.6	1.3	2.3
IE	10	8	10	5	20	0.2	0.7	0.5	1.3
GR	1	1	1	4	1	0.1	0.2	0.1	0.2
ES	3	2	7	7	10	0.3	0.6	0.8	0.7
FR	2	2	3	12	8	0.4	0.9	1.6	1.3
IT	1	2	3	8	20	0.4	1.6	0.4	0.6
CY	4	9	10	6	26	0.3	0.5	6.3	2.6
LV	4	3	4	51	28	0.6	1.5	0.4	1.5
LT	2	1	12	37	9	1.1	3.4	0.3	2.5
LU	3	11	3	4	9	0.0	1.0	0.7	3.1
MT	3	16	3	3	24	0.1	0.1	0.1	0.4
NL	3	3	7	8	31	0.2	0.6	1.7	1.4
AT	3	3	3	10	16	0.5	2.0	0.3	1.3
PT	2	1	5	11	13	0.2	0.7	0.6	0.9
SI	2	2	6	25	5	0.5	1.0	0.4	0.8
SK	2	2	4	13	27	0.6	1.0	0.5	1.3
FI	3	2	6	15	22	1.0	2.2	1.2	2.7
Euro area median	3	2	5	10	16	0.3	1.0	0.5	1.3
Euro area	3	1	8	5	5	0.3	1.0	0.7	0.8
Non-euro area									
BG	6	4	17	102	9	0.8	1.6	1.1	2.7
CZ	2	1	7	17	8	0.4	0.7	2.4	1.8
DK	-	-	-	-	-	-	-	-	-
HR	-	-	-	-	-	-	-	-	-
HU	1	2	4	9	24	0.3	0.3	0.1	2.1
PL	2	1	5	22	15	0.9	1.9	0.5	1.3
RO	3	1	6	29	13	1.0	1.9	0.8	2.8
SE	-	-	-	-	-	-	-	-	-

Source: ECB.

Table A.1.6.2

Net relative revisions (quarterly data) – counterpart area rest of the world

Current account revisions as a percentage of current account items; financial account positions as a percentage of underlying positions

(Q2 2018 to Q1 2021)

	Current account				Financial account transactions			Financial account positions					
	Goods	Services	Primary income	Secondary income	Direct investment	Portfolio investment	Other investment	Direct investment	Portfolio investment	Other investment			
Euro area													
BE	1	1	2	8	5	0.1	0.7	0.1	1.4	0.9	2.3	0.4	2.5
DE	0	1	2	7	1	0.1	0.4	0.2	0.2	3.1	2.8	10.4	0.4
EE	1	1	2	5	7	0.2	0.3	0.3	0.6	1.0	2.6	0.7	1.6
IE	6	3	12	3	6	0.2	1.1	0.3	1.1	0.9	5.4	1.2	3.1
GR	0	0	0	2	0	0.1	0.1	0.0	0.1	1.2	5.9	0.6	1.2
ES	1	1	3	4	3	0.1	0.4	0.2	0.2	0.7	2.3	0.7	0.8
FR	1	1	2	6	2	0.1	0.4	0.3	0.4	0.8	2.7	2.0	1.4
IT	1	1	1	4	2	0.1	0.2	0.2	0.2	0.4	0.9	0.9	0.4
CY	1	3	6	2	5	0.1	0.3	3.9	1.7	0.2	2.8	11.6	10.5
LV	2	1	1	28	24	0.4	0.5	0.1	0.9	1.0	1.8	0.3	3.2
LT	2	1	1	25	7	0.3	0.9	0.1	0.5	0.8	3.2	0.9	0.9
LU	2	10	2	3	7	0.0	0.4	0.2	1.3	0.1	1.8	0.5	3.1
MT	2	5	3	1	6	0.1	0.2	0.0	0.1	0.2	0.8	0.5	2.6
NL	2	2	1	3	8	0.0	0.2	0.5	0.4	0.1	0.7	2.2	0.6
AT	1	1	1	5	2	0.2	0.7	0.2	0.5	0.6	3.8	0.4	1.8
PT	2	1	5	4	9	0.1	0.4	0.3	0.5	0.7	3.7	3.1	2.7
SI	1	1	4	17	3	0.3	0.6	0.1	0.7	2.5	1.6	1.3	4.5
SK	2	2	1	7	11	0.2	0.7	0.2	0.3	0.3	2.1	0.2	0.6
FI	1	1	3	6	23	0.5	1.0	0.3	0.8	1.1	5.6	0.9	2.6
Euro area median	1	1	2	5	6	0.1	0.4	0.2	0.5	0.8	2.6	0.9	1.8
Euro area	1	1	4	2	1	0.1	0.3	0.3	0.3	1.8	1.8	5.3	1.3
Non-euro area													
BG	5	3	11	64	12	0.5	1.2	0.4	1.2	1.5	3.0	0.3	2.6
CZ	1	0	1	7	6	0.1	0.4	0.2	0.5	0.7	1.8	0.4	1.5
DK	2	2	7	5	4	0.1	0.6	0.2	0.3	0.7	2.1	0.7	1.2
HR	1	1	3	33	17	0.3	1.6	1.3	2.1	2.1	8.8	8.6	10.6
HU	1	1	3	7	12	0.1	0.2	0.1	0.6	1.0	1.2	0.1	0.8
PL	1	1	2	8	2	0.4	0.8	0.2	0.6	0.9	1.9	0.8	1.4
RO	1	1	1	12	11	0.3	0.4	0.1	1.1	0.7	1.4	0.5	1.5
SE	1	2	3	4	3	0.2	0.5	0.2	0.3	0.8	1.9	1.8	3.3

Source: ECB.

A.1.7 Indicators on validation rules and consistency of balance-of-payments-related datasets

Table A.1.7.1

Average share of satisfied integrity rules/validations for the monthly balance of payments

Percentage of possible integrity rules

(July 2021 to September 2021)

	CS	Geo2	Geo3	RS	BAL
Euro area					
BE	100	100	100	100	100
DE	100	100	100	100	100
EE	100	100	100	100	100
IE	100	100	100	100	0
GR	100	100	100	100	100
ES	100	100	100	100	100
FR	100	100	100	100	100
IT	100	100	100	100	100
CY	100	100	100	100	100
LV	100	100	100	100	100
LT	100	100	100	100	100
LU	100	100	100	100	100
MT	100	100	100	100	0
NL	100	100	100	100	100
AT	100	100	100	100	100
PT	100	100	100	100	100
SI	100	100	100	100	100
SK	100	100	100	100	100
FI	100	100	100	100	100
Euro area median	100	100	100	100	100
Non-euro area					
BG	100	100	100	100	
CZ	100	100	100	100	
DK	100	100	100	100	
HR	100	100	100	100	
HU	100	100	100	100	
PL	100	100	100	100	
RO	100	100	100	100	
SE	100	100	100	100	

Source: ECB.

Note: The non-availability of results for non-euro area countries is due to the voluntary nature of transmission (Eurostat Regulation).

The calculations are based exclusively on the new requirements introduced in March 2021 by the amended ECB Guideline on external statistics.

Table A.1.7.2**Share of satisfied integrity rules/validations for the quarterly balance of payments****Percentage of possible integrity rules**

(Q2 2021)

	ACC	CONS	CS	FUNC	Geo2	Geo3	Geo4	IAI	MAT	RS	BAL	STR
Euro area												
BE	100	100	100	100	100	100	100	100	100	100	100	100
DE	100	100	100	100	100	100	100	100	100	100	100	100
EE	100	100	100	100	100	100	100	100	100	100	100	100
IE	100	82	100	100	100	100	100	100	100	100	0	100
GR	100	100	100	100	100	100	100	100	100	100	100	100
ES	100	100	100	100	100	100	100	100	100	100	100	100
FR	100	100	100	100	100	100	100	100	100	100	100	100
IT	100	100	100	100	100	100	100	100	100	100	100	100
CY	100	100	100	100	100	100	100	100	100	100	100	100
LV	100	100	100	100	100	100	100	100	100	100	100	100
LT	100	100	100	100	100	100	100	100	100	100	100	100
LU	100	100	100	100	100	100	99	100	100	100	100	100
MT	100	100	100	100	100	100	100	98	100	100	0	100
NL	100	100	100	100	100	100	100	100	100	100	100	100
AT	100	100	100	100	100	100	100	100	100	100	100	100
PT	100	100	100	100	100	100	100	100	100	100	100	100
SI	100	100	100	100	100	100	100	100	100	100	100	100
SK	100	100	100	100	100	100	100	100	100	100	100	100
FI	100	100	100	100	100	100	100	100	100	100	100	100
Euro area median	100	100	100	100	100	100	100	100	100	100	100	100
Non-euro area												
BG	100	100	100	100	100	100	99	100	100	100	100	100
CZ	100	100	100	100	100	100	51	100	100	100	100	100
DK	100	76	100	100	100	100	100	100	100	100	100	100
HR	100	39	100	100	100	100	81	100	100	100	100	100
HU	100	100	100	100	100	100	51	100	100	100	100	100
PL	100	100	100	100	100	100	60	100	100	100	100	100
RO	100	100	100	100	100	100	68	100	100	100	100	100
SE	100	91	84	100	100	100	100	97	89	98	100	83

Source: ECB.

Note: The non-availability of results for non-euro area countries is due to the voluntary nature of transmission (Eurostat Regulation).

The calculations are based exclusively on the new requirements introduced in March 2021 by the amended ECB Guideline on external statistics.

Table A.1.7.3

Share of satisfied integrity rules/validations for the quarterly international investment position

Percentage of possible integrity rules

(Q2 2021)

	ACC	CS	CURR	Geo2	Geo3	Geo4	MAT	REC	RS	SIGN	STR
Euro area											
BE	100	100	100	100	100	100	100	98	100	100	100
DE	100	100	100	100	100	100	100	100	100	100	100
EE	100	100	100	100	100	100	100	100	100	100	100
IE	100	100	100	100	100	100	100	100	100	100	100
GR	100	100	100	100	100	100	100	100	100	100	100
ES	100	100	100	100	100	100	100	100	100	100	100
FR	100	100	100	100	100	100	100	100	100	100	100
IT	100	100	100	100	100	100	100	100	100	100	100
CY	100	100	100	100	100	100	100	100	100	100	100
LV	100	100	100	100	100	100	100	100	100	100	100
LT	100	100	100	100	100	100	100	100	100	100	100
LU	100	100	100	100	100	92	100	100	100	100	100
MT	100	80	100	100	100	100	100	68	100	100	100
NL	100	100	100	100	100	100	100	98	100	100	100
AT	100	100	100	100	100	100	100	100	100	100	100
PT	100	100	100	100	100	100	100	100	99	100	100
SI	100	100	100	100	100	100	100	100	100	100	100
SK	100	100	100	100	100	100	100	100	100	100	100
FI	100	100	100	100	100	100	100	100	100	100	100
Euro area median	100	100	100	100	100	100	100	100	100	100	100
Non-euro area											
BG	100	100	100	100	100	78	100	94	100	100	100
CZ	100	100	100	100	100	37	100	100	99	100	100
DK	100	100	100	100	100	100	100	99	95	100	100
HR	100	100	10	100	100	61	87	100	99	100	97
HU	100	100	100	100	100	35	100	100	99	100	100
PL	100	100	90	99	98	37	100	100	100	100	100
RO	100	100	100	100	100	45	100	100	98	100	100
SE	100	100	70	100	100	100	83	100	95	99	100

Source: ECB.

Note: The non-availability of results for non-euro area countries is due to voluntary transmission provisions (Eurostat Regulation).

The calculations are based exclusively on the new requirements introduced in March 2021 by the amended ECB Guideline on external statistics.

Table A.1.7.4
Average time consistency for the current account
Consistency between monthly and quarterly data as a percentage of the respective item

(Q3 2019 to Q2 2021)

	Current account				Goods				Services				Primary income				Secondary income			
	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW
Euro area																				
BE	100	100	-	100	100	100	100	100	100	100	100	100	100	100	-	100	100	100	100	100
DE	100	100	-	100	100	100	100	100	100	100	100	100	100	100	-	100	100	100	100	100
EE	100	100	-	100	100	100	100	100	100	100	100	100	100	100	-	100	100	100	100	100
IE	95	94	-	88	93	94	87	94	93	93	73	78	87	88	-	90	83	74	86	75
GR	100	100	-	100	100	100	100	100	100	100	100	100	100	100	-	100	100	100	100	100
ES	100	100	-	100	100	100	100	100	100	100	100	100	100	100	-	100	100	100	100	100
FR	100	99	-	100	100	100	100	100	100	100	100	100	99	96	-	98	100	100	100	100
IT	100	100	-	100	100	100	100	100	100	100	100	100	100	100	-	100	100	100	100	100
CY	100	100	-	100	100	100	100	100	100	100	100	100	100	100	-	100	99	100	96	97
LV	100	100	-	100	100	100	100	100	100	100	100	100	100	100	-	99	99	100	100	99
LT	100	100	-	100	100	100	100	100	100	100	100	100	99	99	-	100	100	100	99	100
LU	100	100	-	100	100	100	100	100	100	100	100	100	100	100	-	100	100	100	100	100
MT	100	100	-	100	100	100	100	100	100	100	100	100	100	100	-	100	100	100	99	99
NL	100	100	-	100	100	100	100	100	100	100	100	100	100	100	-	100	100	100	100	100
AT	100	100	-	100	100	100	100	100	100	100	100	100	100	100	-	100	100	100	100	100
PT	100	100	-	100	100	100	100	100	100	100	100	100	100	100	-	100	100	100	100	100
SI	100	100	-	100	100	100	100	100	100	100	100	100	100	100	-	99	100	100	100	100
SK	100	100	-	100	100	100	100	100	100	100	100	100	100	100	-	100	100	100	100	100
FI	100	100	-	100	100	100	100	100	100	100	100	100	100	100	-	100	100	100	98	98
Euro area median	100	100	-	100	100	100	100	100	100	100	100	100	100	100	-	100	100	100	100	100
Euro area	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-
Non-euro area																				
BG	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100
CZ	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100
DK	-	100	-	100	-	100	-	100	-	100	-	100	-	99	-	100	-	100	-	100
HR	-	99	-	99	-	99	-	99	-	98	-	99	-	89	-	87	-	90	-	94
HU	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100
PL	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100
RO	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100
SE	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100

Source: ECB.

Table A.1.7.5

Average time consistency for the financial account

Consistency between monthly and quarterly data as a percentage of the underlying i.i.p. item

(Q3 2019 to Q2 2021)

	Direct investment				Portfolio investment				Other investment			
	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW	Extra EA	RoW
Euro area												
BE	100	100	100	100	100	100	-	100	100	100	100	100
DE	100	100	100	100	100	100	-	100	100	100	100	100
EE	100	100	100	100	100	100	-	100	100	100	100	100
IE	98	99	99	99	100	100	-	100	98	98	98	98
GR	100	100	100	100	100	100	-	100	100	100	100	100
ES	100	100	100	100	100	100	-	100	100	100	100	100
FR	100	100	100	100	100	100	-	100	100	100	100	100
IT	100	100	100	100	100	100	-	100	100	100	100	100
CY	100	100	100	100	100	100	-	100	100	100	100	100
LV	100	100	100	100	100	100	-	100	100	100	100	100
LT	100	100	100	100	100	100	-	100	100	100	100	100
LU	100	100	100	100	100	100	-	100	100	100	100	100
MT	100	100	100	100	100	100	-	100	100	100	100	100
NL	100	100	100	100	100	100	-	100	100	100	100	100
AT	100	100	100	100	100	100	-	100	100	100	100	100
PT	100	100	100	100	100	100	-	100	100	100	100	100
SI	100	100	100	100	100	100	-	100	100	100	100	100
SK	100	100	100	100	100	100	-	100	100	100	100	100
FI	100	100	100	100	100	100	-	100	100	100	100	100
Euro area median	100	100	100	100	100	100	-	100	100	100	100	100
Euro area	100	-	100	-	100	-	100	-	100	-	100	-
Non-euro area												
BG	-	100	-	100	-	100	-	100	-	100	-	100
CZ	-	100	-	100	-	100	-	100	-	100	-	100
DK	-	100	-	100	-	100	-	100	-	100	-	100
HR	-	99	-	100	-	100	-	100	-	98	-	100
HU	-	100	-	100	-	100	-	100	-	100	-	100
PL	-	100	-	100	-	100	-	100	-	100	-	100
RO	-	100	-	100	-	100	-	100	-	100	-	100
SE	-	100	-	100	-	100	-	100	-	100	-	100

Source: ECB.

Table A.1.7.6

Average relative explained changes for financial account sub-components

Consistency between positions and flows as a percentage of the underlying i.i.p. item

(Q3 2019 to Q2 2021)

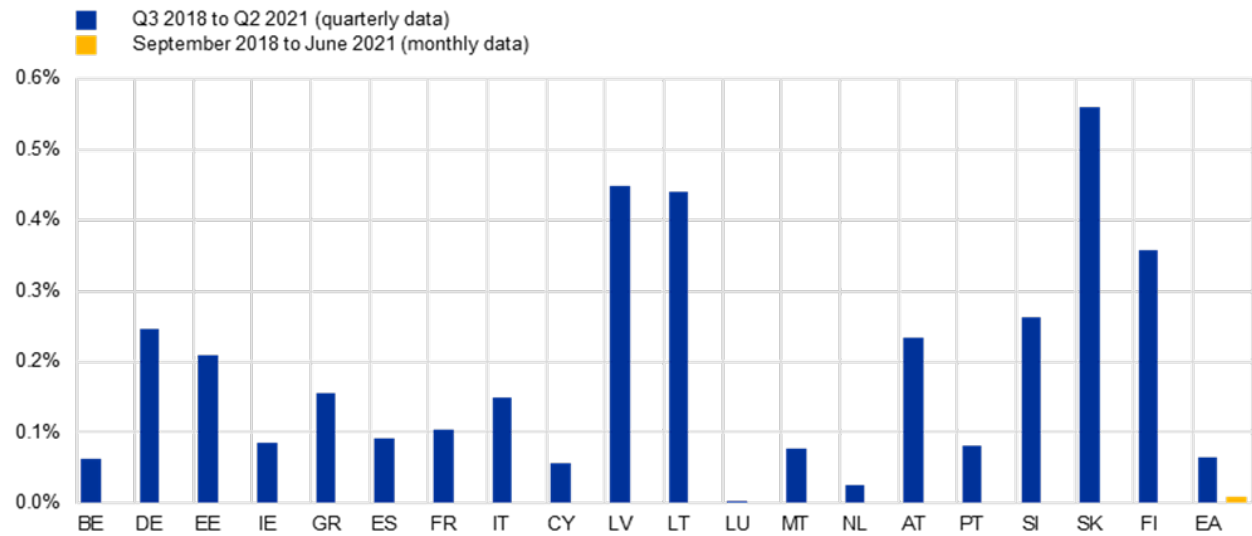
	Direct investment		Portfolio investment		Other investment	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Euro area						
BE	100	100	100	100	100	100
DE	100	100	100	100	100	100
EE	100	100	100	100	100	100
IE	100	100	100	100	100	100
GR	100	100	100	100	100	100
ES	100	100	100	100	100	100
FR	100	100	100	100	100	100
IT	100	100	100	100	100	100
CY	100	100	100	100	100	100
LV	100	100	100	100	100	100
LT	100	100	100	100	100	100
LU	100	100	100	100	100	100
MT	-	-	-	-	-	-
NL	100	100	100	100	100	100
AT	100	100	100	100	100	100
PT	100	100	100	100	100	100
SI	100	100	100	100	100	100
SK	100	100	100	100	100	100
FI	100	100	100	100	100	100
Euro area median	100	100	100	100	100	100
Euro area	100	100	100	100	100	100
Non-euro area						
BG	99	100	98	98	99	99
CZ	100	100	100	100	100	100
DK	100	100	100	100	100	100
HR	-	-	-	-	-	-
HU	100	100	100	100	100	100
PL	-	-	-	-	-	-
RO	100	100	100	100	100	100
SE	-	-	-	-	-	-

Source: ECB.

Chart A.1.7.1

Average net errors and omissions relative to the average international investment position

As a percentage of the i.i.p.



Source: ECB.

A.1.8 Coherence with international trade in goods statistics

Table A.1.8.1

Directional consistency for b.o.p. total goods and ITGS (merchandise trade)

As a percentage of the analysed period

(Q3 2018 to Q2 2021; as a percentage of the analysed period)

	Exports/goods credits		Imports/goods debits	
	Rest of the world	Extra-euro area	Rest of the world	Extra-euro area
Euro area				
BE	100	91	100	100
DE	100	91	100	100
EE	91	100	91	82
IE	100	82	100	73
GR	100	100	100	91
ES	100	100	100	100
FR	91	100	91	100
IT	100	100	100	100
CY	91	91	91	91
LV	100	100	100	82
LT	91	100	91	100
LU	91	73	91	100
MT	45	100	45	82
NL	82	100	82	91
AT	100	91	100	73
PT	91	91	91	100
SI	91	73	91	91
SK	100	100	100	91
FI	100	100	100	100
Euro area median	100	100	100	91
Euro area	-	100	-	100
Non-euro area				
BG	100	-	100	-
CZ	91	-	91	-
DK	91	-	91	-
HR	91	-	91	-
HU	82	-	82	-
PL	100	-	100	-
RO	91	-	91	-
SE	91	-	91	-

Source: ECB.

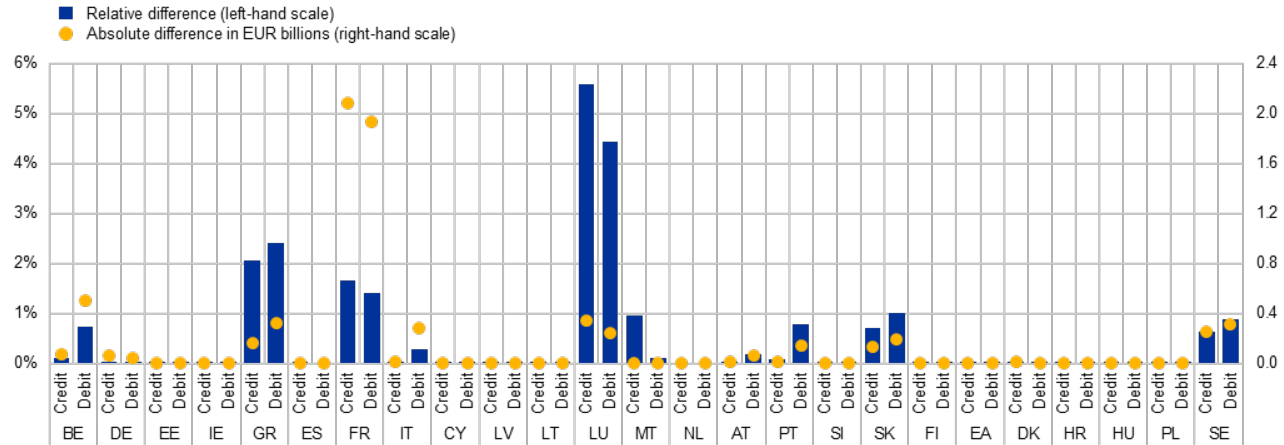
A.1.9 Consistency with sectoral accounts

Chart A.1.9.1

Discrepancies in goods between the b.o.p. and the RoW account

As a percentage of the respective b.o.p. account item

(Q3 2018 to Q2 2021)



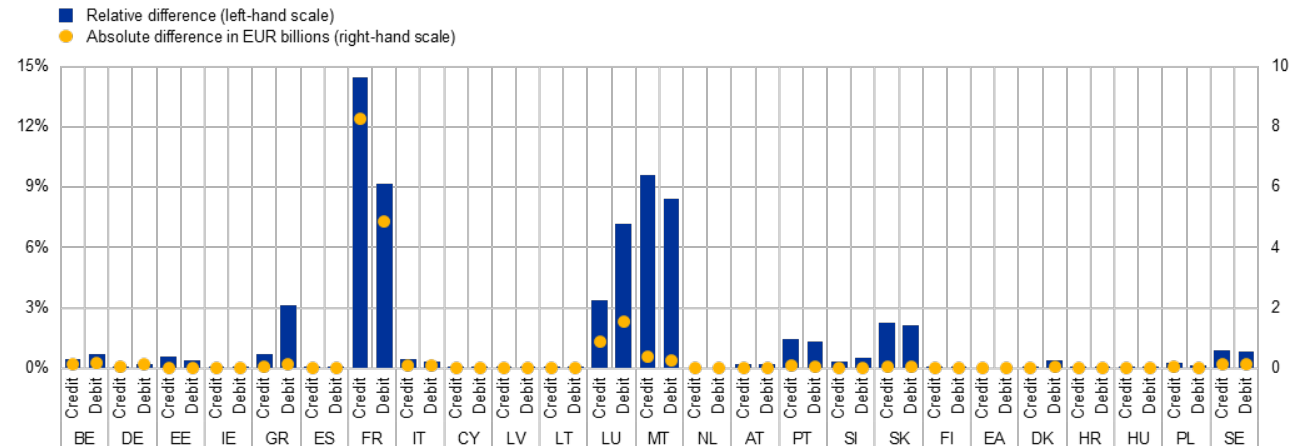
Source: ECB.

Chart A.1.9.2

Discrepancies in services between the b.o.p. and the RoW account

As a percentage of the respective b.o.p. account item

(Q3 2018 to Q2 2021)



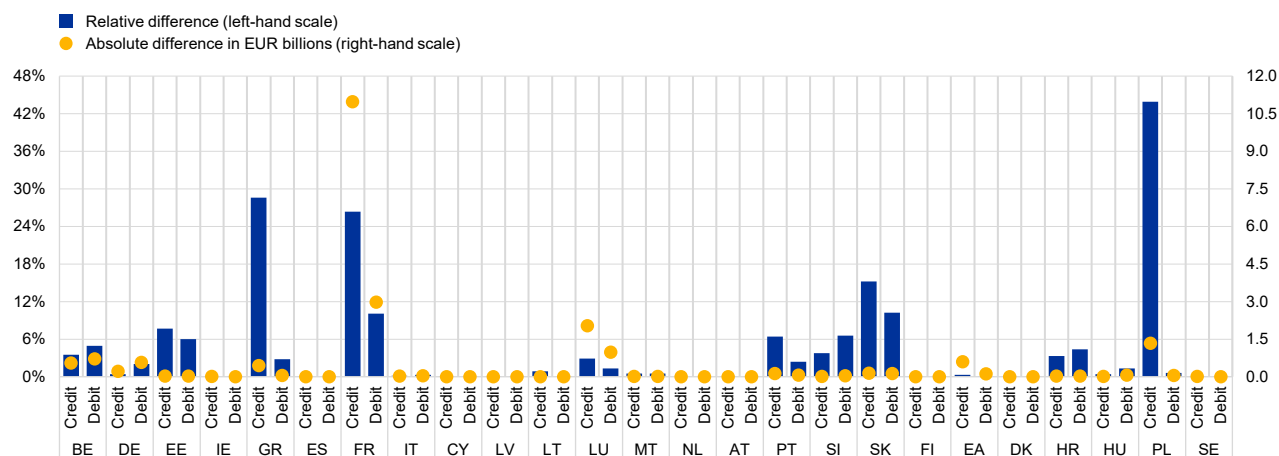
Source: ECB.

Chart A.1.9.3

Discrepancies in primary income between the b.o.p. and the RoW account

As a percentage of the respective b.o.p. account item

(Q3 2018 to Q2 2021)



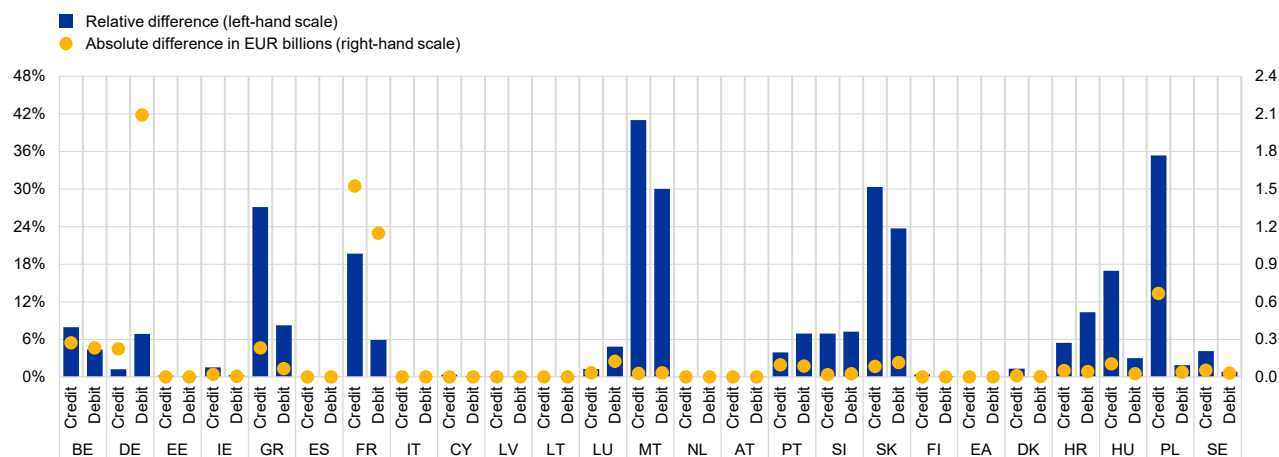
Source: ECB.

Chart A.1.9.4

Discrepancies in secondary income between the b.o.p. and the RoW account

As a percentage of the respective b.o.p. account item

(Q3 2018 to Q2 2021)



Source: ECB.

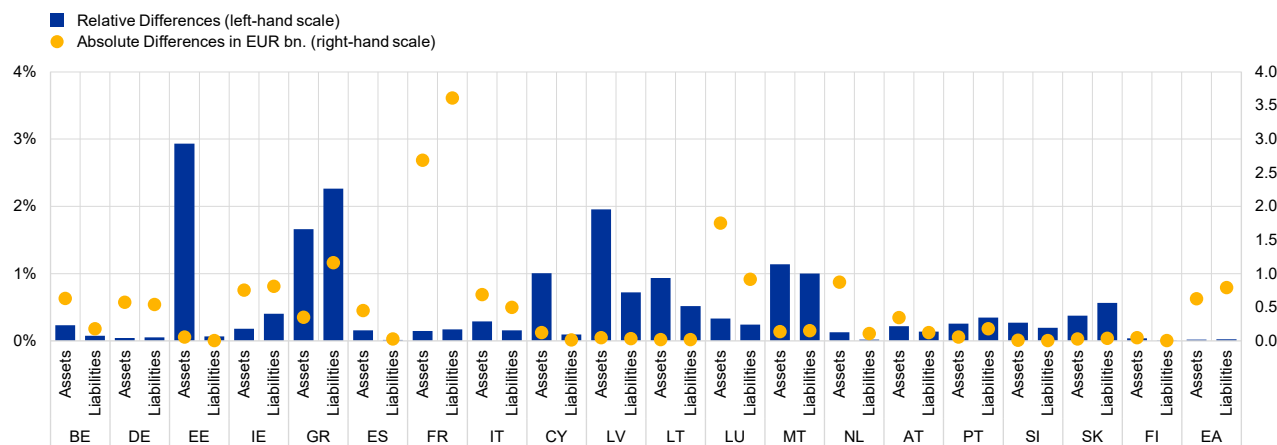
A.1.10 Coherence with MFI balance sheet data

Chart A.1.10.1

Loans and deposits transactions discrepancies between the b.o.p. and BSI – quarterly data (MFI excluding the Eurosystem)

Percentage of the respective b.o.p. account item

(Q3 2018 to Q2 2021)



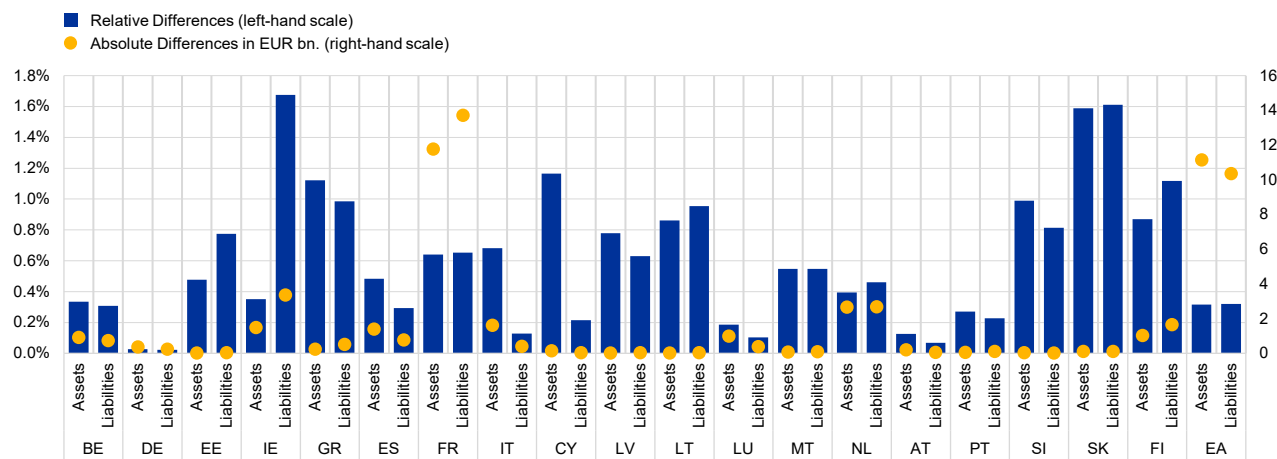
Source: ECB.

Chart A.1.10.2

Loans and deposits transactions discrepancies between the b.o.p. and BSI – monthly data (MFI excluding the Eurosystem)

Percentage of the respective b.o.p. account item

(July 2018 to June 2021)



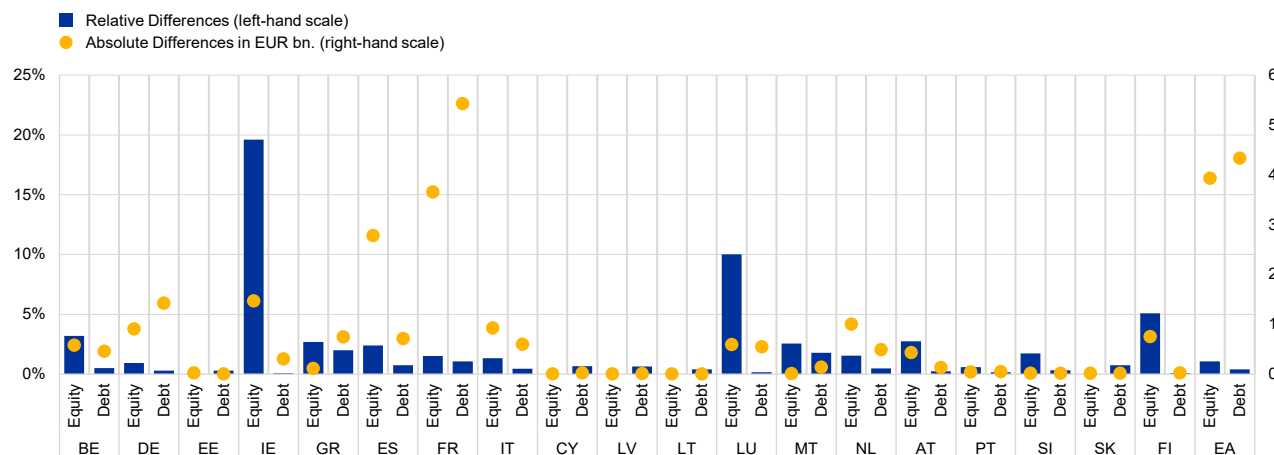
Source: ECB.

Chart A.1.10.3

Equity and debt securities assets transactions discrepancies between the b.o.p. and BSI – quarterly data (MFI excluding the Eurosystem)

Percentage of the respective b.o.p. account item

(Q3 2018 to Q2 2021)



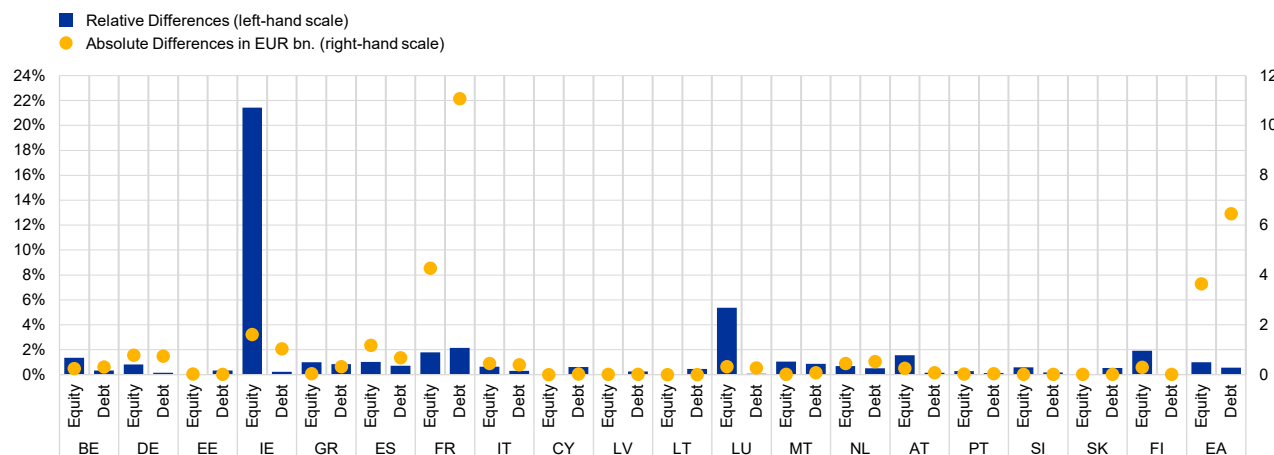
Source: ECB.

Chart A.1.10.4

Equity and debt securities assets transactions discrepancies between the b.o.p. and BSI – monthly data (MFI excluding the Eurosystem)

Percentage of the respective b.o.p. account item

(July 2018 to June 2021)



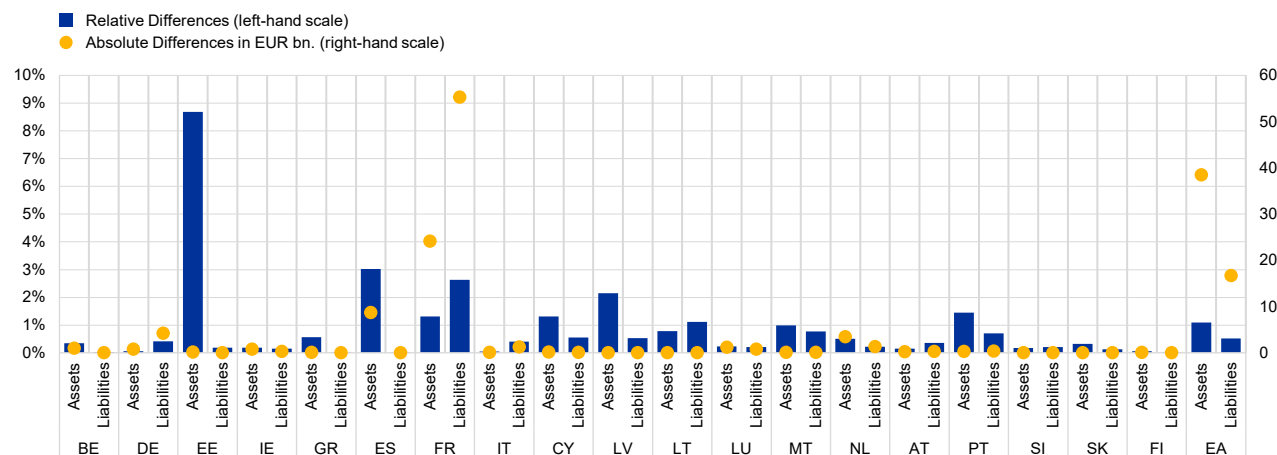
Source: ECB.

Chart A.1.10.5

Loans and deposits positions discrepancies between the i.i.p. and BSI – quarterly data (MFI excluding the Eurosystem)

Percentage of the respective i.i.p. account item

(Q3 2018 to Q2 2021)



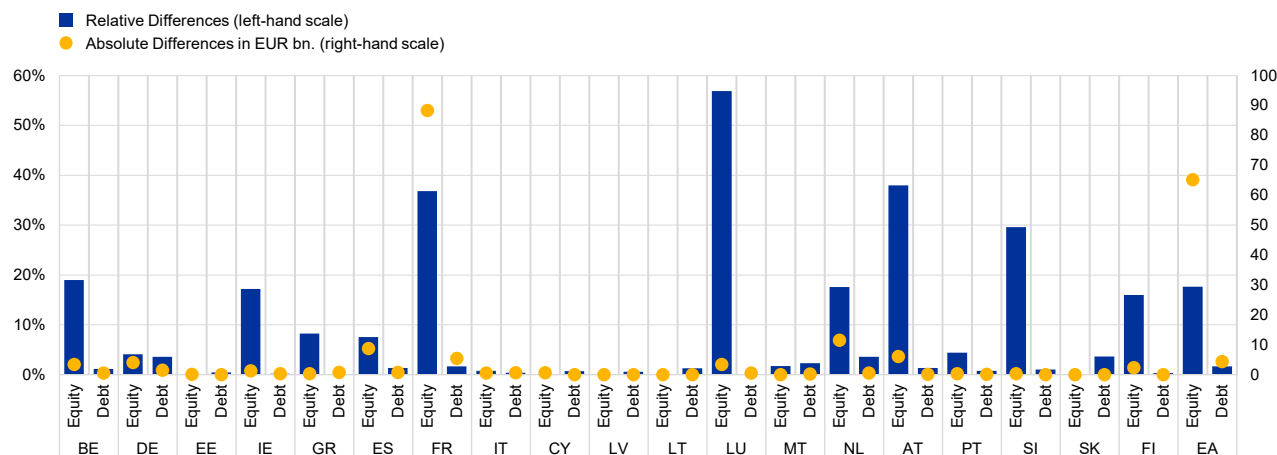
Source: ECB.

Chart A.1.10.6

Equity and debt securities assets positions discrepancies between the i.i.p. and BSI – quarterly data (MFI excluding Eurosystem)

Percentage of the respective i.i.p. account item

(Q3 2018 to Q2 2021)



Source: ECB.

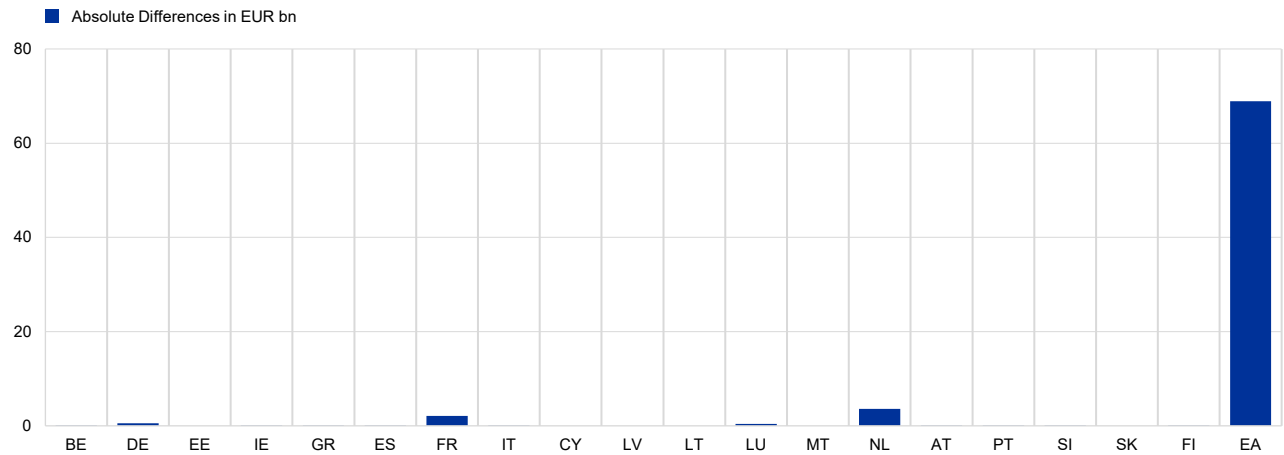
A.1.11 Coherence with money market fund statistics

Chart A.1.11.1

MMF shares liabilities positions discrepancies between the i.i.p. and MMF statistics

Average absolute difference in EUR billions

(Q3 2018 to Q2 2021)



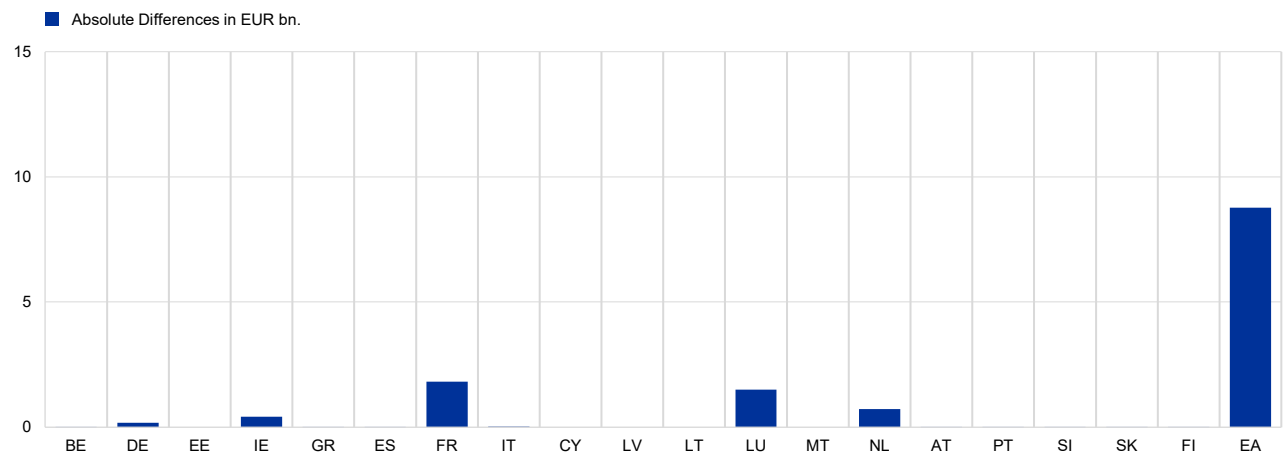
Source: ECB.

Chart A.1.11.2

MMF shares liabilities transactions discrepancies between the b.o.p. and MMF statistics

Average absolute difference in EUR billions

(Q3 2018 to Q2 2021)



Source: ECB.

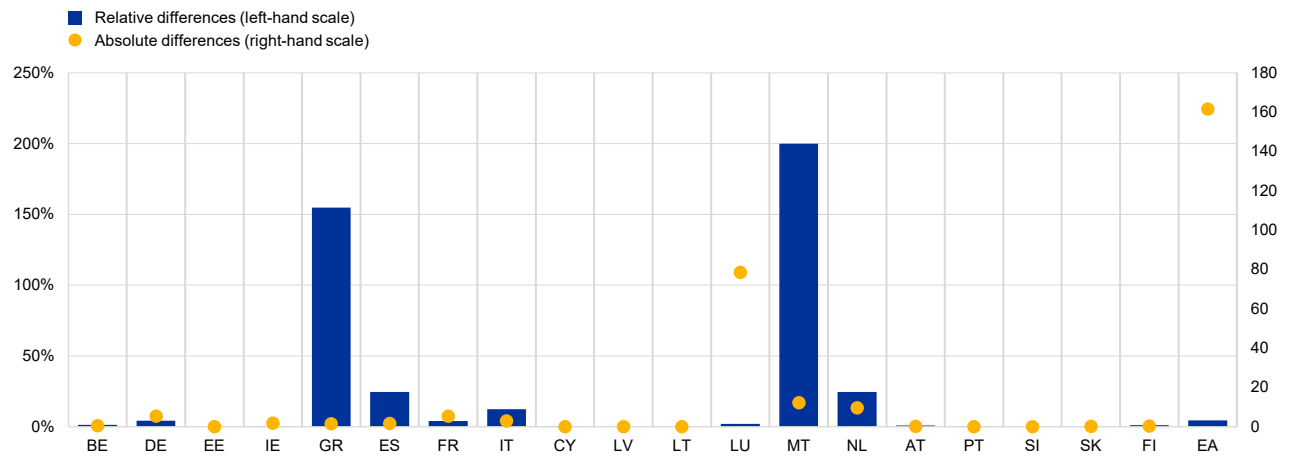
A.1.12 Coherence with investment fund statistics

Chart A.1.12.1

IVF positions liabilities discrepancies between the i.i.p. and IF statistics

As a percentage of the respective i.i.p. account item (left-hand scale), in EUR billions (right-hand scale)

(Q3 2018 to Q2 2021)



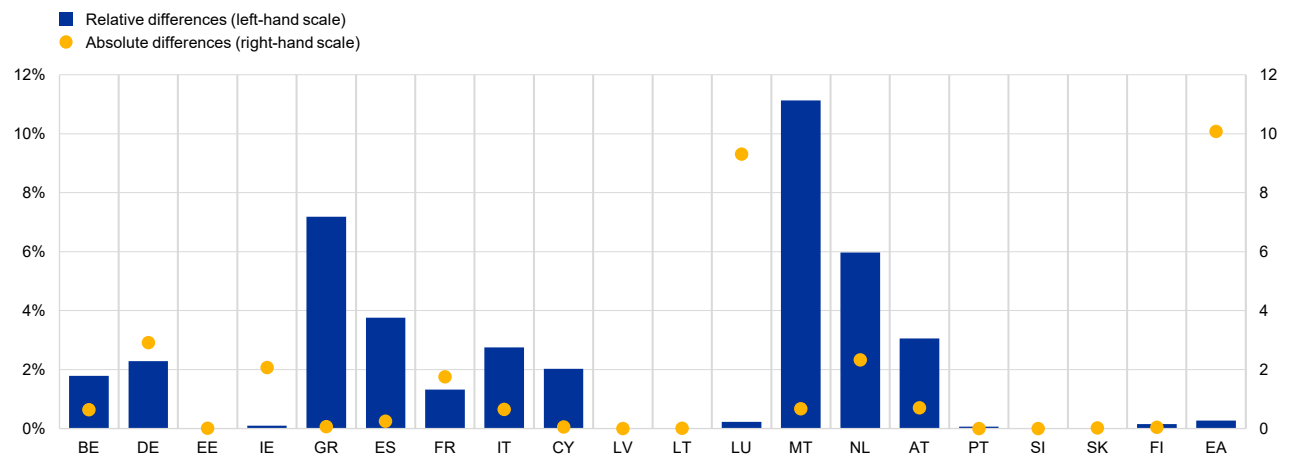
Source: ECB.

Chart A.1.12.2

IVF transaction liabilities discrepancies between the b.o.p. and IF statistics

As a percentage of the respective b.o.p. account item (left-hand scale), in EUR billions (right-hand scale)

(Q3 2018 to Q2 2021)



Source: ECB.

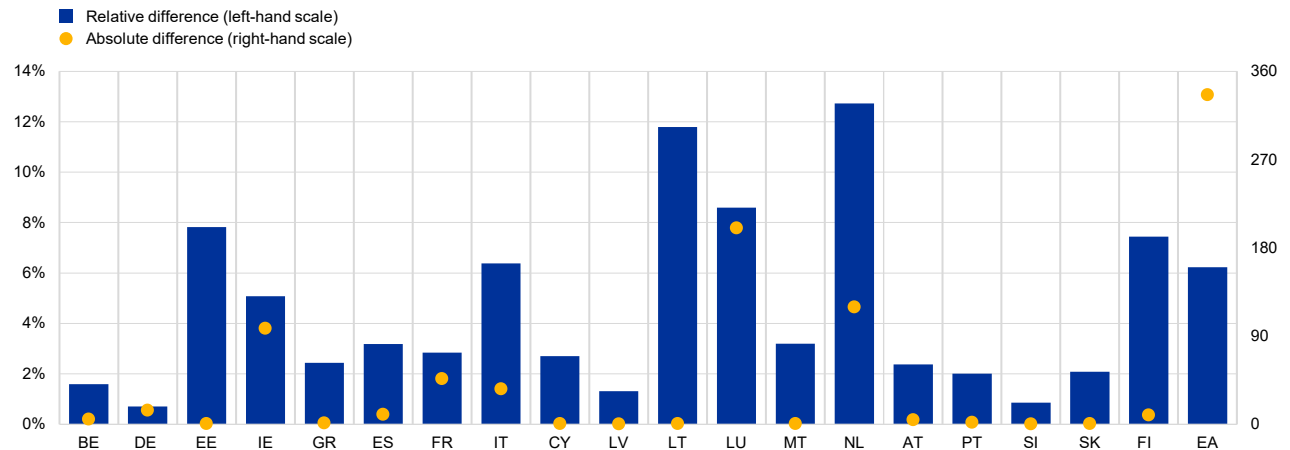
A.1.13 Coherence with securities holdings statistics

Chart A.1.13.1

Portfolio investment debt securities positions discrepancies between the i.i.p. and SHSS statistics

As a percentage of the respective i.i.p. account item (left-hand scale), in EUR billions (right-hand scale)

(Q3 2018 to Q2 2021)



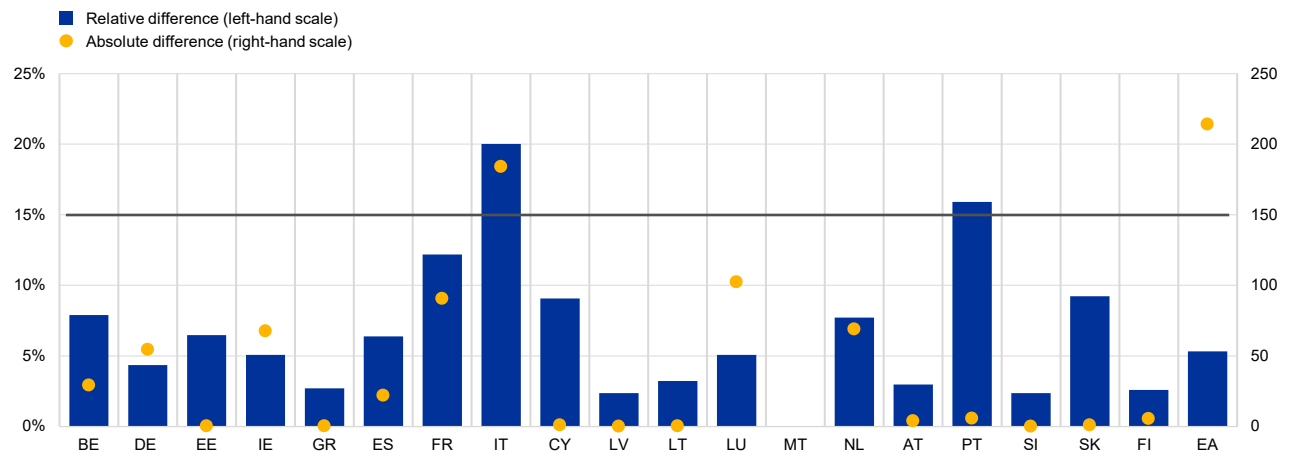
Source: ECB.

Chart A.1.13.2

Portfolio investment equity (listed shares and investment funds shares) positions discrepancies between the i.i.p. and SHSS statistics

As a percentage of the respective i.i.p. account item (left-hand scale), in EUR billions (right-hand scale)

(Q3 2018 to Q2 2021)



Source: ECB.

A.1.14 Summary indicators on bilateral asymmetries

Table A.1.14.1

Internal geographical quality indicator, foreign direct investment transactions

(Q3 2018 to Q2 2021)

Date	AT	BE	CY	DE	EE	ES ⁶²	FI	FR	GR	IE	IT	LT	LU	LV	MT	NL	PT	SI	SK
2018Q3	0.76	0.55	0.77	0.56	0.38	0.48	0.79	0.38		0.62	0.42	0.86	0.34	0.69	0.82	0.40	0.58	0.50	
2018Q4	0.88	0.69	0.79	0.46	0.75	0.43	0.72	0.30		0.88	0.25		0.35	0.79		0.50	0.79	0.56	
2019Q1	0.65	0.53	0.31	0.63	0.24	0.47	0.70			0.87	0.60	0.21	0.53		0.90	0.59	0.50	0.51	0.63
2019Q2	0.80	0.53	0.62	0.40	0.73	0.43	0.47	0.54		0.53	0.62	0.48	0.52		0.85	0.58	0.45	0.81	0.69
2019Q3	0.65	0.39	0.83	0.33	0.70	0.35	0.68	0.41		0.75	0.36	0.65	0.38	0.56	0.86	0.50	0.47	0.62	0.45
2019Q4	0.52	0.50	0.90	0.43	0.54	0.55	0.54	0.58		0.55	0.55	0.68	0.48	0.66	0.97	0.52	0.66	0.64	0.45
2020Q1	0.48	0.53	0.80	0.60	0.68	0.44	0.66	0.56	0.84	0.81	0.48	0.68	0.40	0.62	0.97	0.52	0.80	0.55	0.39
2020Q2	0.49	0.56	0.85	0.45	0.65	0.45	0.55	0.65	0.63	0.25	0.64	0.78	0.31	0.60	0.93	0.42	0.63	0.38	0.42
2020Q3	0.87	0.48	0.91	0.61	0.51	0.35	0.85	0.69	0.61	0.42	0.74	0.78	0.50	0.78	0.98	0.69	0.62	0.41	0.56
2020Q4	0.63	0.51	0.93	0.43	0.81	0.34	0.43	0.42	0.87	0.37	0.29	0.88	0.41	0.53	0.91	0.56	0.55	0.47	0.49
2021Q1	0.86	0.66	0.66	0.79	0.83	0.78	0.87	0.40	0.57	0.71	0.71	0.76	0.69	0.68	0.87	0.54	0.24	0.82	0.39
2021Q2	0.73	0.32	0.67	0.74	0.08	0.62	0.75	0.51	0.85	0.54	0.56	0.54	0.81	0.63	0.93	0.55	0.50	0.25	0.49

Source: ECB.

Table A.1.14.2

External geographical quality indicator, foreign direct investment transactions

(Q3 2018 to Q2 2021)

Date	AT	BE	CY	DE	EE	ES ⁶³	FI	FR	GR	IE	IT	LT	LU	LV	MT	NL	PT	SI	SK
2018Q3	0.63	0.14	0.25	0.26	0.08	0.42	0.23	0.20		0.15	0.08	0.21	0.27	0.32	0.24	0.18	0.20	0.15	
2018Q4	0.06	0.53	0.05	0.32	0.41	0.13	0.43	0.06		0.27	0.09		0.14	0.67		0.48	0.49	0.08	
2019Q1	0.16	0.29	0.23	0.36	0.19	0.16	0.18			0.23	0.33	0.08	0.35		0.54	0.19	0.35	0.34	0.38
2019Q2	0.18	0.52	0.18	0.36	0.49	0.29	0.27	0.23		0.24	0.24	0.37	0.22		0.68	0.23	0.20	0.13	0.45
2019Q3	0.36	0.19	0.30	0.12	0.31	0.17	0.26	0.23		0.16	0.19	0.33	0.35	0.16	0.64	0.17	0.08	0.11	0.29
2019Q4	0.42	0.27	0.10	0.07	0.37	0.26	0.05	0.37		0.32	0.25	0.36	0.15	0.13	0.85	0.22	0.48	0.39	0.13
2020Q1	0.10	0.09	0.61	0.31	0.52	0.18	0.04	0.13	0.35	0.46	0.21	0.26	0.23	0.33	0.81	0.22	0.32	0.25	0.24
2020Q2	0.29	0.23	0.53	0.12	0.43	0.26	0.11	0.20	0.36	0.05	0.17	0.40	0.11	0.13	0.40	0.18	0.43	0.23	0.17
2020Q3	0.60	0.08	0.69	0.13	0.32	0.11	0.66	0.29	0.24	0.22	0.24	0.37	0.27	0.26	0.88	0.50	0.14	0.02	0.27
2020Q4	0.44	0.26	0.40	0.13	0.51	0.30	0.16	0.20	0.38	0.18	0.14	0.61	0.16	0.24	0.31	0.34	0.48	0.14	0.23
2021Q1	0.30	0.23	0.07	0.48	0.47	0.67	0.33	0.15	0.27	0.47	0.25	0.05	0.27	0.17	0.61	0.07	0.13	0.66	0.25
2021Q2	0.44	0.07	0.22	0.46	0.05	0.59	0.10	0.21	0.70	0.30	0.04	0.04	0.49	0.49	0.67	0.09	0.36	0.15	0.08

Source: ECB.

⁶² For Spain, the worsening of the indicator in Q1 2021 and Q2 2021 is related to some transaction erroneously collected by a counterpart. The error was clarified during the Asymmetry Resolution Meetings and it will be corrected in the coming transmission, by the counterpart.

⁶³ Same as above.

Table A.1.14.3

Internal geographical quality indicator, foreign direct investment positions

(Q3 2018 to Q2 2021)

Date	AT	BE	CY	DE	EE	ES	FI	FR	GR	IE	IT	LT	LU	LV	MT	NL	PT	SI	SK
2018Q3	0.13	0.07	0.26	0.06	0.28	0.07	0.14	0.09		0.24	0.10	0.21	0.14	0.31	0.45	0.09	0.12	0.25	
2018Q4	0.12	0.07	0.25	0.06	0.25	0.06	0.19	0.09		0.23	0.09	0.20	0.16	0.28	0.45	0.09	0.12	0.26	0.21
2019Q1	0.11	0.08	0.24	0.08	0.25	0.06	0.20	0.09		0.24	0.10	0.19	0.14	0.29	0.41	0.11	0.12	0.27	0.16
2019Q2	0.11	0.09	0.23	0.09	0.24	0.07	0.23	0.09		0.24	0.09	0.15	0.14	0.28	0.42	0.12	0.13	0.26	0.17
2019Q3	0.11	0.09	0.23	0.08	0.25	0.07	0.23	0.09		0.23	0.09	0.15	0.13	0.28	0.42	0.12	0.14	0.26	0.17
2019Q4	0.09	0.09	0.23	0.08	0.25	0.07	0.24	0.07	0.22	0.22	0.08	0.17	0.14	0.27	0.55	0.11	0.15	0.26	0.16
2020Q1	0.10	0.06	0.22	0.09	0.26	0.08	0.20	0.08	0.23	0.20	0.11	0.17	0.13	0.28	0.53	0.11	0.14	0.27	0.15
2020Q2	0.10	0.07	0.23	0.09	0.26	0.08	0.20	0.09	0.22	0.24	0.11	0.22	0.14	0.28	0.54	0.11	0.14	0.25	0.16
2020Q3	0.14	0.08	0.24	0.08	0.26	0.08	0.19	0.08	0.23	0.27	0.13	0.24	0.15	0.26	0.54	0.10	0.13	0.26	0.15
2020Q4	0.14	0.08	0.25	0.09	0.25	0.10	0.18	0.09	0.20	0.28	0.11	0.18	0.15	0.27	0.48	0.11	0.16	0.24	0.15
2021Q1	0.16	0.08	0.25	0.10	0.26	0.11	0.20	0.09	0.20	0.29	0.11	0.17	0.15	0.25	0.46	0.11	0.15	0.25	0.16
2021Q2	0.17	0.09	0.24	0.10	0.22	0.09	0.20	0.09	0.20	0.29	0.11	0.17	0.15	0.28	0.49	0.11	0.15	0.28	0.18

Source: ECB.

Table A.1.14.4

External geographical quality indicator, foreign direct investment positions

(Q3 2018 to Q2 2021)

Date	AT	BE	CY	DE	EE	ES	FI	FR	GR	IE	IT	LT	LU	LV	MT	NL	PT	SI	SK
2018Q3	0.08	0.03	0.13	0.04	0.19	0.03	0.06	0.05		0.21	0.08	0.11	0.10	0.13	0.15	0.03	0.07	0.22	
2018Q4	0.06	0.03	0.12	0.04	0.17	0.03	0.10	0.05		0.20	0.08	0.10	0.13	0.15	0.18	0.04	0.08	0.21	0.07
2019Q1	0.05	0.00	0.11	0.04	0.18	0.03	0.10	0.05		0.22	0.08	0.10	0.11	0.14	0.15	0.04	0.08	0.24	0.09
2019Q2	0.05	0.03	0.09	0.05	0.16	0.04	0.11	0.05		0.21	0.08	0.11	0.11	0.15	0.17	0.05	0.09	0.23	0.12
2019Q3	0.05	0.01	0.09	0.05	0.17	0.04	0.12	0.05		0.22	0.07	0.10	0.10	0.15	0.19	0.04	0.10	0.23	0.12
2019Q4	0.06	0.01	0.09	0.04	0.17	0.03	0.14	0.05	0.09	0.20	0.05	0.12	0.10	0.15	0.30	0.04	0.12	0.23	0.12
2020Q1	0.05	0.04	0.10	0.05	0.18	0.03	0.13	0.05	0.10	0.17	0.09	0.12	0.09	0.16	0.29	0.06	0.10	0.23	0.10
2020Q2	0.05	0.05	0.12	0.04	0.17	0.04	0.13	0.05	0.07	0.17	0.08	0.15	0.10	0.17	0.27	0.06	0.11	0.21	0.11
2020Q3	0.11	0.05	0.11	0.04	0.15	0.04	0.12	0.05	0.08	0.17	0.10	0.13	0.10	0.15	0.27	0.06	0.09	0.22	0.11
2020Q4	0.12	0.05	0.13	0.05	0.13	0.04	0.10	0.04	0.06	0.16	0.09	0.08	0.11	0.18	0.29	0.06	0.12	0.20	0.12
2021Q1	0.14	0.02	0.12	0.05	0.12	0.02	0.10	0.03	0.04	0.17	0.08	0.08	0.10	0.15	0.29	0.06	0.11	0.21	0.11
2021Q2	0.15	0.02	0.12	0.05	0.10	0.06	0.10	0.04	0.03	0.14	0.09	0.08	0.11	0.19	0.32	0.06	0.11	0.24	0.12

Annex 2: Methodological documentation for quality indicators

A.2.1 Data availability

Completeness

BPM6 requirements are broken down into three types: mandatory series, agreed by the WG ES/WG BOP, and voluntary series. Any indicator for data completeness should strictly take into account the mandatory series, in accordance with ECB Guideline on external statistics and Regulation (EC) 184/2005.

The recommended indicator to be used to measure data availability for all datasets (the average completeness ratio (ACR)) considers the average number of reported observations per period divided by the number of total mandatory series requested.

There should be a breakdown by dataset (DSET): monthly b.o.p. (MBOP), quarterly b.o.p. (QBOP), quarterly i.i.p. (QIIP) and quarterly revaluations.

$$ACR_{DSET} = \frac{\sum_{t=1}^N \text{mandatory observations transmitted} / N}{\sum_{t=1}^N \text{Total no. of observations required per dataset per period} / N}$$

where N stands for the number of periods.

As the indicator only takes into account the number of mandatory series, the target value for the indicator is 100%.

Accessibility

Accessibility refers to the conditions under which users can obtain, use, and interpret data, ultimately reflecting how easy it is for users to access the data. Data accessibility may be limited by confidentiality constraints. Council Regulation No 2533/98 concerning the collection of statistical information by the ECB⁶⁴ sets out the ESCB statistical confidentiality regime. In addition, the so-called ECB Confidentiality Guideline⁶⁵ establishes the common rules and minimum standards to protect the confidentiality of the statistical information collected by the ECB, with the assistance of the NCBs.

⁶⁴ Council Regulation (EC) No 2533/98 of 23 November 1998 concerning the collection of statistical information by the European Central Bank (OJ L 318, 27.11.1998, p. 8).

⁶⁵ See Guideline of the ECB of 22 December 1998 concerning the common rules and minimum standards to protect the confidentiality of the individual statistical information collected by the ECB assisted by the national central banks (ECB/1998/NP28).

Regulation 2015/759 of 29 April 2015, amending Regulation (EC) No 223/2009 on European statistics of 11 March 2009⁶⁶ (Recital 24 and Article 20(4)) specifies the need to establish common principles and guidelines for ensuring the confidentiality of data used for the production of European statistics and for access to those data.

In line with this legal framework, all data must be sent with a flag indicating its confidentiality level. There are clear guidelines on how to use these confidentiality flags. The ECB and Eurostat encourage national compilers to make as much data available to users as possible (i.e. mark observations as “free for publication”) and ensure that flags are appropriately used.

The recommended indicator in this domain is the average share of observations (obs.) marked as “free for publication” per period and per dataset:

$$\begin{aligned} & \text{Average share of free obs.}_{DSET} \\ &= \frac{\sum_{t=1}^N \text{No. of obs. marked as free}}{\sum_{t=1}^N \frac{\text{No. of obs. required per dataset per period}}{N}} \end{aligned}$$

A.2.2 Accuracy and reliability (including stability)

Upward revisions ratio

In principle, positive and negative revisions should occur with roughly the same frequency. If the revisions are, for example, systematically positive, this may point to under-coverage in early estimates that needs to be corrected. A simple indicator for this phenomenon is the ratio between upward revisions and the number of observations considered (N).

$$\text{Upward revisions ratio} = (\# \text{ upward revisions}) / N$$

The number of observations considered should exclude near-zero revisions, defined as revisions that are lower than 0.5% of the later assessment of the series for current account items and financial account positions, and 0.01% of the underlying positions for financial account transactions.

Since positive and negative revisions should occur with roughly the same frequency, around half of the revisions should be upward. The prescriptive target for this indicator is therefore between 40% and 60%.

⁶⁶ Regulation (EU) 2015/759 of the European Parliament and of the Council of 29 April 2015 amending Regulation (EC) No 223/2009 on European statistics (OJ L 123, 19.5.2015, p. 90).

Directional reliability indicator

To assess whether the information on the direction of changes contained in earlier estimates has been altered by the revisions, a two-by-two contingency table may be used. In this contingency table, the columns consist of positive and negative first differences in the initial estimates:

$$\Delta x_{t_I} = x_{t_I} - x_{(t-1)_I}$$

The rows consist of positive and negative changes in the latest values:

$$\Delta x_{t_L} = x_{t_L} - x_{(t-1)_L}$$

Table A.2.2.1
Contingency table for directional reliability

	$\Delta x_{t_I} > 0$	$\Delta x_{t_I} \leq 0$	<i>Subtotal</i>
$\Delta x_{t_L} > 0$	n_{11}	n_{12}	$n_{11} + n_{12}$
$\Delta x_{t_L} \leq 0$	n_{21}	n_{22}	$n_{21} + n_{22}$
<i>Subtotal</i>	$n_{11} + n_{21}$	$n_{12} + n_{22}$	N

The directional reliability indicator (Q) is then defined as follows:

$$Q = \frac{n_{11} + n_{22}}{N}$$

When the changes in either the initial or the latest assessments are near zero, these observations should be excluded from the calculation of the indicators. Near-zero changes are defined in the same way as near-zero revisions (see previous section on upward revisions).

This coefficient Q is equal to one if the changes following the first and latest estimates always have the same sign ($n_{11} + n_{22} = N$), and is equal to zero when there is a total dissociation ($n_{11} + n_{22} = 0$). Higher values of this indicator are therefore preferred.

Since revisions should not substantially alter the economic message of the first assessments, the prescriptive target for the directional reliability indicator is somewhat high at 80%. This would mean that in at least eight out of ten cases, the first assessments correctly predicted the movement of the series between two consecutive observations.

Relative size: mean absolute percentage error (MAPE)

In the case of strictly positive data, the relative revision equals the percentage change of the initial assessment:

$$\% \text{ change of initial assessment} = \left(\frac{x_t^L - x_t^I}{x_t^I} \right)$$

If the average over time is then computed, this is called the mean percentage error (MPE):

$$MPE = \overline{\left(\frac{x_t^L - x_t^I}{x_t^I} \right)}$$

As revisions can be positive or negative, it is usually more appropriate to take the absolute value in order to avoid revisions of opposite signs cancelling each other out in the resulting indicator. So, if the average is calculated with absolute values, the result is the MAPE.

The existing research oscillates between two alternative definitions of the indicator: (a) an average of the ratios and (b) a ratio of averages. This second definition has a significant advantage over the first: if a single data point of the denominator is close to zero, the indicator, applying definition (a), will be artificially magnified, but not necessarily in the case of definition (b). An additional advantage of using the ratio of averages is, according to van Kempen and van Vliet⁶⁷, that its expectation is asymptotically unbiased, while the average of the ratio is biased.

$$MAPE_{\text{average of ratios}} = \frac{1}{T} \sum_{t=1}^T \left| \frac{x_t^L - x_t^I}{x_t^I} \right|$$

$$MAPE_{\text{ratio of averages}} = \frac{\sum_{t=1}^T |x_t^L - x_t^I| / T}{\sum_{t=1}^T |x_t^I| / T}$$

It is therefore recommended that MAPE be calculated as a ratio of averages.

The prescriptive target should be a suitable measure of central tendency for all EU or euro area countries for each item. The median would provide a more robust measure; the arithmetic mean would potentially be sensitive to outlying observations, and extreme values would need to be removed.

Relative size: SMAPE

MAPE is an asymmetric indicator. Consider the example used by Makridakis⁶⁸ for forecast errors: if the actual value is 150 and the forecast is 100, MAPE would yield a

⁶⁷ van Kempen, G.M.P., and van Vliet, L.J., "Mean and variance of ratio estimators used in fluorescence ratio imaging", *Cytometry*, Vol. 39, No 4, 2000, pp. 300-305.

⁶⁸ Makridakis, S., "Accuracy measures: theoretical and practical concerns", *International Journal of Forecasting*, Vol. 9, Issue 4, 1993, pp. 527-529.

result of 33.33%; however, if the actual value is 100 and the forecast is 150, MAPE would yield a result of 50% (MAPE is defined over the actual value). If, on average, revisions are positive, MAPE would be higher than if those revisions were negative. In the case of the denominator being defined in terms of the latest estimates, the result would be the opposite.

The SMAPE was proposed in order to get a symmetric indicator. According to Makridakis, this indicator would be (with a couple of modifications from Makridakis' proposal):

$$SMAPE = \frac{\sum_{t=1}^T |x_t^L - x_t^I| / T}{\sum_{t=1}^T (|x_t^L| + |x_t^I|) / T}$$

Compared with MAPE, this indicator fixes the previous issue of asymmetry and is bounded between zero and one (or 100%), while MAPE is not bounded on the upper side. However, SMAPE shows a different class of asymmetry. Following Goodwin and Lawton⁶⁹, if the actual value is 100 (again using forecast errors as an example) and the forecast error is +10 or -10, SMAPE would result in 4.7% in the first case and 5.2% in the second. Conversely, MAPE would result in 10% in both cases. In other words, SMAPE gives relevance to the initial observation (the forecast of the initial estimates), while MAPE does not.

Relative size: MACE

To overcome the fact that transactions in financial assets and liabilities can be positive and negative, and therefore not usable in the denominator, revisions to financial assets and liabilities can be related to the respective i.i.p. item for assessing their relative size. The indicator will be expressed as $\frac{R}{P}$, where P is the related i.i.p. item. As for strictly positive data, an average of the absolute value of this ratio can be taken over time in order to avoid revisions of opposite signs cancelling each other out in the resulting indicator.

MACE is defined as:

$$MACE_{average\ of\ ratios} = \frac{1}{T} \sum_{t=1}^T \left| \frac{x_t^L - x_t^I}{p_t^L} \right|$$

Likewise, the recommendation would be to calculate MACE as a ratio of averages.

$$MACE_{ratio\ of\ averages} = \frac{\sum_{t=1}^T |x_t^L - x_t^I| / T}{\sum_{t=1}^T |p_t^L| / T}$$

As the i.i.p. is not available at a monthly frequency, MACE calculations for revisions to monthly b.o.p. data use the i.i.p. level at the end of the corresponding quarter.

⁶⁹ Goodwin, P. and Lawton, R., "On the asymmetry of the symmetric MAPE", *International Journal of Forecasting*, Vol. 15, Issue 4, 1999, pp. 405-408.

Relative size: indicators assessing revisions for balance/net items

In the case of balance/net time series, revisions cannot be properly related to the series value itself because the observations may have different signs, and, more importantly, the values of the series may often be close to zero. As the revision of these balance/net data cannot meaningfully be related to the size of the variable itself, alternative dimensional measures of the series must be used. To enhance understanding of the size of the revisions for the balance/net items, the revisions can be related to average current account flows or the underlying positions of financial assets/liabilities, as applicable. These indicators are NRRs:

$$NRR_{CA} = \frac{\sum_{t=1}^T |x_t^L - x_t^I| / T}{\frac{1}{2} \sum_{t=1}^T (x_t^{L\text{credit}} + x_t^{L\text{debit}}) / T}$$

$$NRR_{FA} = \frac{\sum_{t=1}^T |x_t^L - x_t^I| / T}{\frac{1}{2} \sum_{t=1}^T (p_t^{\text{assets}} + p_t^{\text{liabilities}}) / T}$$

The following table shows which measures of revisions for the b.o.p./i.i.p. are to be used in the annual quality report.

Table A.2.2.2
Measures of b.o.p./i.i.p. revisions

	Current account	Financial account – transactions	Financial account – positions
Debits	SMAPE	-	-
Credits	SMAPE	-	-
Net	NRR	-	-
Assets	-	MACE	SMAPE
Liabilities	-	MACE	SMAPE
Balance	-	NRR	NRR

A.2.3 Internal consistency

Validation/integrity rules

National compilers perform data validation to ensure full accounting consistency of their data. The ECB and Eurostat provide a comprehensive record (Booklet and Vademecum) of all the validations and rules that BPM6 data are subject to upon data reception. Therefore, this section of the quality report should focus on the extent to which national datasets comply with these linear accounting constraints and consistency checks. For an overview of the linear constraints applied upon data reception by the ECB, please see below.

ACC: accounting item, e.g. the balance should be equal to credit minus debit.

IAI: international accounts item, e.g. the current account is equal to the sum of its components (goods, services, and primary and secondary income).

CONS: time consistency (the sum of the monthly data should be equal to the data reported on a quarterly basis).

CS: counterpart sector (follows the same intuition as the reference sector type).

CURR: currency classification, e.g. the currency breakdown of debt securities adds up to the total.

FUNC: functional category (equality between the financial account and its sub-account following BPM6 conventions).

GEO2,3,4: geographical breakdown, e.g. the sum of the intra and extra-euro area/EU transactions should be equal to transactions vis-à-vis the RoW.

MAT: maturity classification, e.g. long-term and short-term maturities add up to all original maturities.

Multidimensional checks: these ensure, for example, that for other investment, the sum of instruments by sector is smaller than or equal to total other investment for that sector. This only applies to positions.

REC: position/flow reconciliation (positions, transactions, and other flows are interlinked: position in period t is equal to position in period t-1 plus transactions in period t plus other flows in period t).

RS: reference sector (total economy (S1) should be consistent with the sum of the sub-sectors (i.e. S121, S12T, S13, S1P)).

RSCS: resident sector – counterpart issuer sector consistency (rule ensuring that total portfolio investment by resident and counterpart issuer sectors is identical in the case of intra and extra-euro area transactions).

STR: instrument and assets classification, e.g. gross external debt is equal to the sum of its sub-components.

An indicator (the average share of satisfied validations (ASSV)) can be devised per type of validation rule in the following manner:

$$ASSV_{DSET}^{TYPE} = 1 - \frac{(\sum_{t=1}^N \text{Total no. of validations not satisfied} / N)}{(\sum_{t=1}^N \text{Total no. of validations to be satisfied} / N)}$$

where TYPE refers to the type of validation, DSET to the dataset in question, and N to the number of observations for the period under analysis.

Since the indicator is applied only to mandatory series, national compilers are expected to provide fully validated data, and/or explanations when the target is not met. The recommended target should therefore be 100%.

Consistency across frequencies

Consistency between monthly and quarterly datasets is normally ensured by national compilers. However, some national compilers only produce monthly data for the compilation of euro area aggregates, usually following a simplified compilation approach (e.g. only partial accrual accounting). In some periods, quarterly and monthly data are thus not necessarily fully reconciled. An indicator (the ATC) assessing the monthly/quarterly consistency should be compiled:

$$ATC = 1 - \frac{\sum_{t=1}^N [Q_t - SUM(M_{t_1}, M_{t_2}, M_{t_3})] / N}{\sum_{t=1}^N |Q_t| / N}$$

where Q_t represents the quarterly value for a given item and $M_{t_1}, M_{t_2}, M_{t_3}$ the corresponding monthly observations.

For the financial account, because transactions can be zero, the indicator should use the respective position series as a denominator (similar to the MACE indicator for revisions).

As national compilers should provide fully consistent data across monthly and quarterly frequencies, the recommended target is 100%.

Reconciliation between positions and flows

The position/flow reconciliation equation⁷⁰ ensures that b.o.p. and i.i.p. data are consistent. In order to ensure comparability between countries, the AREC can be expressed as a percentage of the corresponding i.i.p. item:

$$AREC = 1 - \frac{(\sum_{t=1}^N |(LE(t) - LE(t-1) + T(t) + K7A(t) + K7B(t) + KA(t))|) / N}{\sum_{t=1}^N LE(t) / N}$$

As the other changes in volume are only requested (as agreed by the WG ES and WG BOP) with the RoW (W1) as the counterpart area, reconciliation can only be performed for the RoW counterpart area.

Position/flow consistency is one of the core features of the accounting framework and a necessary condition for a quality dataset. Full reconciliation (i.e. 100%) between positions and flows should therefore be the target.

Net errors and omissions (n.e.o.)

Average relative error for current account

The average relative error (ARE) for the current account can be calculated in the following manner:

⁷⁰ $LE(t) = LE(t-1) + T(t) + K7A(t) + K7B(t) + KA(t)$; LE – positions, T – transactions, K7A – exchange rate changes, K7B – other price changes, KA – other changes in volume.

$$ARE(EO)_{CA} = \frac{(\sum_{t=1}^N |EO_t|) / N}{\frac{1}{2} \sum_{t=1}^N ([CA, t]_c^{W1} + [CA, t]_d^{W1}) / N}$$

where EO_t represents net errors and omissions in reference quarter t, N is the number of periods analysed (12 quarterly observations over three years), $[CA, t]_c^{W1}$ is the current account in reference quarter t for credit vis-à-vis the RoW (W1) and $[CA, t]_d^{W1}$ represents the corresponding current account debit entry.

Since n.e.o. are a residual (error) item in the b.o.p., they are expected to be relatively small and not persistently positive or negative. ARE assesses the absolute size of the n.e.o. in relation to the current account. The choice of target is subjective as n.e.o. are not a direct result of the current account but of the inconsistencies between all the accounts. The prescriptive target should be the median of all EU countries.

Average relative error for the i.i.p.

The ARE for the i.i.p. can be calculated in the following manner:

$$ARE(EO)_{i.i.p.} = \frac{(\sum_{t=1}^N |EO_t|) / N}{\frac{1}{2} \sum_{t=1}^N ([FA_{LE}, t]_A^{W1} + [FA_{LE}, t]_L^{W1}) / N}$$

where EO_t represents net errors and omissions in reference quarter t, N is the number of periods analysed (12 quarterly observations over three years), $[FA_{LE}, t]_A^{W1}$ is the i.i.p. in reference quarter t for assets vis-à-vis the RoW (W1) and $[FA_{LE}, t]_L^{W1}$ represents the corresponding liabilities entry.

Cumulative net errors and omissions for the current account/i.i.p.

Cumulative relative error (CRE) can be expressed as follows:

$$CRE(EO)_{CA}^T = \frac{\sum_{t=1}^N EO_t}{([CA, T]_c^{W1} + [CA, T]_d^{W1}) / 2}$$

where T is a given time period and CA the current account.

Likewise, this indicator can be calculated for the i.i.p. The denominator is defined as $([FA_{LE}, t]_A^{W1} + [FA_{LE}, t]_L^{W1}) / 2$ in this case.

This indicator should be presented for several time periods (e.g. one year, five years, ten years) in order to show long-term behaviour and to isolate sensitivity to significant outliers.

This indicator tests the persistency of the sign of n.e.o. or the bias. A value of zero would therefore be expected in the medium to long term. This target assumes that n.e.o. should be a white noise process, i.e. one with a zero mean and no correlation between its values at different times. Cumulated errors and omissions should therefore tend to zero in the long run.

A.2.4 Asymmetries

Bilateral asymmetries

Several measures can summarise the level of geographical quality by country. Here, we make use of two indicators, each aimed at capturing different aspects of geographical quality:

1. internal country geographical indicator (ICQG), providing information on the quality of the bilateral data;
2. external country geographical quality indicator (XCGQ), providing information on country totals vis-à-vis the overall mirror data.

Using the following notation, the formulas for the two measures are given below:

i is the index of the country to which the quality index applies;

c is the index of the counterpart country;

w is a predefined weight that applies to all countries, which by default is equal to 0.5; and,

$\sum_c |A_{i,c}|$ reflects the sum of absolute values of the assets reported by country i (positions or transactions), broken down by counterpart country c .

Likewise, $\sum_c |L_{i,c}|$ reflects the sum of absolute values of the liabilities reported by country i .

$\sum_c |A_{i,c} - L_{c,i}|$ measures the sum of absolute values of the bilateral asymmetries of the assets of country i vis-à-vis its counterparts; and,

$\sum_c |L_{i,c} - A_{c,i}|$ represents the sum of absolute values of the bilateral asymmetries of the liabilities of the same country i vis-à-vis its counterparts.

The ICQG is expressed as follows:

$$ICQG_i = \left[w \cdot \frac{\sum_c |A_{i,c} - L_{c,i}|}{\sum_c |A_{i,c}| + \sum_c |L_{c,i}|} + (1 - w) \cdot \frac{\sum_c |L_{i,c} - A_{c,i}|}{\sum_c |L_{i,c}| + \sum_c |A_{c,i}|} \right]$$

The ICQG is constrained to be within the range [0, 1], with zero being optimal and one being the worst score.

It assesses the quality of the geographical breakdown vis-à-vis each of the countries that also provide geographical information, calculating the accuracy of the geographic classification within the sample of countries where bilateral data are provided, by aggregating the absolute bilateral asymmetries. It could have higher values even when, on balance, a country reports a correct aggregate intra-euro area estimate, but would be challenged in obtaining the right allocation across individual counterpart countries.

The XCGQ takes the absolute difference between the total values reported and the total available mirror data. The purpose of the XCGQ is to assess how well a country's intra-EU or intra-euro area aggregate is reflected in mirror data, thus providing an indicator of the quality of a country's intra/extra-breakdown. XCGQ is in the range [0, 1], with values close to zero indicating a good value and values close to one indicating low quality, and one component being over or underestimated vis-à-vis the other:

$$XCGQ_i = \left[w \cdot \frac{|\sum_c A_{i,c} - \sum_c L_{c,i}|}{\sum_c |A_{i,c}| + \sum_c |L_{c,i}|} + (1 - w) \cdot \frac{|\sum_c L_{i,c} - \sum_c A_{c,i}|}{\sum_c |L_{i,c}| + \sum_c |A_{c,i}|} \right]$$

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