

Inventory of sources and methods for Financial Account Statistics in the context of the MIP – Denmark

Based on CMFB TG revised template-draft 20 June 2018

A. INSTITUTIONAL ENVIRONMENT

A.1 *CoP1 professional independence/ PCI Professional Independence*

A.1.1 Legal basis

Danmarks Nationalbank (DN) is responsible for producing the quarterly financial accounts in Denmark, while Statistics Denmark (SD) is responsible for the production of the annual accounts.

The independence of SD is provided by law No. 1189 by 21 December 1992 ("Lov om Danmarks Statistik"). The independence of DN is provided by Law No. 116 by 7 April 1936 ("Lov om Danmarks Nationalbank"). The independence of DN, in its capacity as a member of the ESCB, is further emphasized in Article 130 of the EU Treaty and Article 7 of the Statute of the ESCB and of the ECB, which stipulate that "when exercising the powers and carrying out the tasks and duties conferred upon them..., neither the ECB nor a national central bank nor any member of their decision making bodies shall seek or take instructions from Community institutions or bodies, from any government of a Member State or from any other body. The Community institutions and bodies and governments of the Member States undertake to respect this principle and not to seek to influence the members of the decision making bodies of the ECB or of the national central banks in the performance of their tasks."

A.1.2 Statistics work programme

The statistical work program of Statistics Denmark is described in the publication "Strategy 2025 – Statistics Denmark", available to the public via <http://www.dst.dk/en/OmDS/strategi-og-kvalitet>.

Danmarks Nationalbank does not have a separate statistical work program, and instead the quarterly financial accounts are guided by the work of ECB which can be found here: <http://www.ecb.europa.eu/stats/pdf/2017escbstatisticsworkprogramme.en.pdf>.

From September 2020 the annual and quarterly financial accounts of the national accounts are compiled in collaboration between Danmarks Nationalbank and Statistics Denmark. The result is fully consistent annual and quarterly financial accounts for the periods 2017-2022 both regarding the input data used for compilation and regarding outputs.

A.2 *CoP2 Mandate for data collection / PC2 Mandate for data collection*

A.2.1 Allocation of responsibilities

Statistics Denmark (SD) is responsible for the compilation of the annual financial accounts (stocks, other changes in volume and transactions) for the whole set of ESA2010 sectors and for the compilation of the quarterly financial account of the government sector.

Danmarks Nationalbank (DN) is responsible for the compilation of quarterly financial accounts.

A.2.2 Legal basis

Regulation (EU) No 549/2013 of the European Parliament and of the Council of 21 May 2013 on the European system of national and regional accounts in the European Union.

The responsibility of Danmarks Nationalbank to collect statistics is specified in Law No. 579 of 1 June 2010. Furthermore, as part of ESCB, DN is allocated the task of collecting necessary statistical information in the ECB Guideline (ECB/2013/24) of 25 July 2013.

A.3 CoP6 Impartiality and objectivity / PC6 Impartiality and objectivity

A.3.1 Advanced release calendar

The publication date for annual financial accounts appears in the release calendar on SD website <http://www.dst.dk/en/Statistik/planlagte>. The date is confirmed in the weeks before.

The publication dates of the quarterly financial accounts are published on this website: <http://www.nationalbanken.dk/en/statistics/calendar/Pages/default.aspx>.

A.3.2 Revision policy

Statistics Denmark revises published figures in accordance with the Revision Policy in Statistics Denmark, which is described on SD website (<http://www.dst.dk/en/OmDS/strategi-og-kvalitet/revisionspolitik.aspx>). Preliminary annual financial sector accounts are prepared and published three times a year: at the end of March, at the end of June and at the end of September. Final annual national accounts are published once a year at the end of June about two and a half years after the reference year.

Danmarks Nationalbank revises the quarterly financial account in accordance to the Revision Policy in Danmarks Nationalbank: http://www.nationalbanken.dk/en/statistics/revision_policy/Pages/default.aspx.

The Harmonised European Revision Policy advised by the CMFB is followed completely in the annual and quarterly financial accounts.

B. STATISTICAL PROCESSES

B.1 CoP7 Sound methodology / PC7 Sound methodology

B.1.1 General remarks

The financial accounts in Denmark are compiled in accordance with the methodology of the European system of national and regional accounts (ESA2010). A general version of national documentation, consistent with ESA 2010 sources and methods is available at <https://www.dst.dk/en/Statistik/dokumentation/documentationofstatistics/national-accounts--financial-accounts>.

B.1.2 Residency and territory

In accordance with the commission Regulation (EC) No 109/2005, the financial accounts statistics (as a part of the Danish national accounts) cover the economic territory of the Kingdom of Denmark except for the Faeroe Islands and Greenland.

B.1.3 Institutional unit definition

In the compilation of the financial accounts the definition of institutional unit is compliant with the definitions in ESA 2010.

B.1.4 Sectorisation and sector delimitation

In the compilation of the financial accounts the sector definition and delimitation are compliant with the definitions in ESA 2010.

B.1.5 Instrument identification

In the compilation of the financial accounts the definitions of the financial instruments are compliant with the definitions in ESA 2010.

B.1.6 Valuation, including derivation of transactions

Market prices are the basis for the valuation of transactions and positions. Nominal valuation as defined by ESA 2010 is used for positions in deposits and loans (except for mortgage loans that are redeemable at the market value of the underlying mortgage bonds). Unlisted company shares are valued by applying 90% to the stock market capitalization/own funds ratio observed for listed companies in the same industry (i.e. a 10% discount applies because of their lower liquidity). Other equity are valued by both statistics on the basis of the book value (own funds).

B.1.7 Time of recording (accrual accounting)

Interests accrued are recorded with the financial asset or liability on which they accrue.

B.1.8 Coverage gaps

Regarding the coverage of the OFIs (S.125+S.126+S.127) the complete population is identified by the industry classification NACE Rev. 2. Any company is obligated to register their main activity of the company to the Danish Business Authority. Emerging digital annual reports have enabled a full coverage of OFIs as well as a more timely coverage of the annual data. The existence of these digital reports has eliminated the necessity for grossing-up procedures, which were used for the annual data. Estimation of the quarterly figures is based on the latest annual data.

B.1.9 Non-consolidation/consolidation at sectoral level - As required under the ESA 2010 Transmission program (Tables 6 and 7)

On annual basis both transactions and positions are compiled on a consolidated and non-consolidated basis in the financial accounts. Assets and liabilities of sector non-financial corporations (S.11) are compiled consolidated using counterpart data from other sectors. Non-financial corporations' balance sheets data are used to estimate inter-company loans in S.11.

Danmarks Nationalbank reports non-consolidated quarterly financial accounts but the database is conceived as a full who-to-whom matrix, which allows for the calculation of the consolidated data for each financial instrument and each institutional sector.

Table 6 and 7 transmitted to Eurostat are fully consistent with Regulation 549/2013 in terms of requested series (consolidated/non-consolidated) from 1995.

B.1.10 Specific issues for instruments covered by MIP indicators

As explained in B.1.9, inter-company loans are derived from balance sheet data and counterpart data from other sectors. A simple resume of the method is given below.

First, calculate the total non-financial liabilities excluding equity from balance sheet data. Balance sheet data is then extrapolated to period t:

$$Liabilities_t^{BSdata} = \sum_{i=1}^N Liabilities_{it} \text{ where } N \text{ is number of firms in the database.}$$

Then subtract the similar instruments from all counterpart sectors:

$$Intercompany_loans_t = Liabilities_t^{BSdata} - Liabilities_t^{QFA_counterpart\ sector}$$

B.1.11 Other major deviation not listed above

None.

B.2 CoP8 Appropriate Statistical procedures / PC8 Appropriate Statistical procedures

B.2.1 Data sources map

See next page.

B.2.2 Description of procedures and methods (brief overall description, to clarify the data source map)

Financial accounts is a secondary statistics compiled by using primary statistics collected by DN and SD. The table (see source map) describes the main data sources used in the financial accounts compilations process.

Government sector data comes from QFAGG and is left unchanged. Rest of the world data comes from Balance of Payments and is also left unchanged. Financial sector data arise mainly from MFI balance sheet statistics, investment funds statistics, statistics on major insurance companies and consumer credit companies, pension funds statistics, security holdings/issues statistics, and balance of payments. Non-financial corporations sector is mostly based on non-financial corporation balance sheets data. Households sector is primarily constructed by counterpart information.

B.2.3 Estimation of missing data

When original data sources are only available annually, quarterly data are interpolated.

B.2.4 Balancing procedures (horizontal and vertical)

With regard to individual underlying statistics the DN and DS have defined a common hierarchy of priorities for using statistics, especially when they measure the same item in the matrix (e.g. bank loans to the general government sector, which are an integral part of the DN's MFI balance sheet statistics and of the general government finance statistics of SD) of the financial accounts. To achieve consistency the discrepancies are resolved by the following process:

1. Vertical consistency within a sector or subsector. In this respect if necessary, other accounts receivable/payable (F.8) are adjusted in order to ensure vertical consistency.
2. Horizontal consistency within a financial instrument for all sectors, unless overruled by vertical consistency. If necessary, non-financial corporations (S.11) and OFIs (S.125, S.126, S.127) are the sectors most likely adjusted in order to ensure horizontal consistency.

The same balancing procedures are applied for both the annual and the quarterly financial accounts.

B.2.5 Methods to align quarterly and annual data

The annual and quarterly financial accounts are compiled in a common IT compilation system based on the best experiences of DN and SD, which also involves common reconsideration of data sources, prioritization between sources and rules for reconciliation. Thus, the quarterly and annual financial accounts are fully aligned for the period from 2017 to 2022.

B.2.1: Data source map for financial accounts

Map of main data sources

Country:

Denmark

Name of institution:

Statistics Denmark and
Danmarks Nationalbank

Year:

2023

		Assets									Liabilities									Key for data sources and calculation/estimations:	
		S11	S12K	S124	S120	S128	S129	S13	S14+ S15 HH+ NPISH	S2	S11	S12K	S124	S120	S128	S129	S13	S14+ S15 HH+ NPISHs	S2		
		NFCs	MFI	IFs	OFI	IC	PF	Gov		RoW	NFCs	MFI	IFs	OFI	IC	PF	Gov		RoW		
F11	Monetary gold		MFI					0										0		NFC	Non-financial corporation balance sheets
F12	SDRs							0		BoP*						0			BoP	Sur	Survey data
F21	Currency	*	MFI		NFC	IC	PF	QFAGG	*	BoP		MFI*							BoP	MFI	MFI balance sheet statistics
F22	Deposits, transferable	MFI,BoP*	MFI*	MFI	MFI*	MFI	MFI	QFAGG	MFI*	BoP	0	MFI, QF AGG				QFAGG			BoP	IF	Investment fund statistics
F29	Deposits, other	MFI*	MFI	MFI	MFI*	MFI	MFI	QFAGG	MFI*	BoP	0	MFI				QFAGG			BoP	FVC	Financial vehicle corporations statistics
F3	Debt securities	SHS	SHS	SHS	SHS	SHS	SHS	QFAGG	SHS	BoP	SHS	SHS	0	SHS	SHS	SHS	QFAGG	SHS	BoP	OFI	Other financial institution statistics
F4	Loans	NFC*	MFI	IF, MFI	NFC*, MFI	IC,	MFI, PF	QFAGG	IC, NFC*	BoP	MFI/NFC*	MFI	IF	NFC*	IC	PF	QFAGG	NFC*	BoP	IC	Insurance corporations statistics
F511	Listed shares	SHS	SHS	SHS	SHS	SHS	SHS	QFAGG	SHS	BoP	SEC	SHS	0	SEC	SEC	SEC	QFAGG	0	BoP	PF	Pension fund statistics
F512	Unlisted shares	NFC*	SHS	SHS	SHS*	IC	PF	QFAGG	NFC*	BoP	NFC	SEC	0	SEC	PF	PF	QFAGG	0	BoP	QFAGG	Quarterly financial accounts for general government
F519	Other equity	NFC*	SHS	SHS	NFC*	IC	PF	QFAGG	NFC*	BoP	NFC	SEC	0	NFC	PF	PF	QFAGG		BoP	BoP	Balance of payments and international investment position.
F52	Investment fund shares/units	IF*	IF	IF	IF*	PF	PF	QFAGG	IF*	BoP			IF						BoP	SEC	Securities issues statistics
F61	Non-life insurance techn. res.	IC*	IC*		IC*	IC	PF	QFAGG	IC*	BoP					IC				BoP	SHS	Securities holdings statistics
F62	Life insurance and annuities								IC*	BoP					IC				BoP	0	known to be zero (e.g. if concept does not exist)
F63- F65	Pension entitlements	PF					PF		PF*	BoP				0	IC	PF	QFAGG	0	BoP		
F66	Standardised guarantees			0	0	0	0	0	QFAGG	BoP					QFAGG		QFAGG		BoP		
F7	Financial derivatives	MFLPF	MFI*	IC	MFLIC	IC	PF	QFAGG	MFLPF	BoP	MFLPF	MFI	IC	MFLIC	IC	PF	QFAGG	MFLPF	BoP		
F81	Trade credits and advances	NFC*	BoP	BoP	NFC	IC BoP	PF BoP	QFAGG	NFC	BoP	NFC*	MFI	BoP	NFC	IC	PF	QFAGG	BoP, NFC	BoP		
F89	Other accounts excl. F81	NFC*#	MFI#	IF#	NFC*#	IC#	PF#	QFAGG#	NFC*#	BoP	NFC*	MFI*	IF	NFC*	IC	PF	QFAGG	BoP, NFC*	BoP		

* "Residual sector for respective instrument - i.e. the sector (assets or liabilities) where source is available, but most likely adapted to achieve horizontal consistency.

** Pure residual calculation as no source data for a meaningful plausibility check is available.

Different source and/or adjustment for transactions (if applicable):

Transactions partially adjusted to improve ("vertical") consistency with non-financial accounts B9.

Different source for quarterly and/or preliminary data (if applicable):

2) Quarterly financial accounts

Not 2) Same source

C. STATISTICAL OUTPUT

C.1 *CoP11 Relevance / PC11 Relevance*

Generally, financial accounts provide the opportunity to see the broader, macroeconomic perspective, which is an informative foundation for further analysis, e.g. on a microeconomic level. Financial accounts are also used as a way to control each source across each other.

At the international level, the financial accounts are used as an input for the Special Data Dissemination Standard of the IMF (e.g. Financial Soundness Indications) and are required for the annual IMF Article IV consultations. In the EU, they are part of the scoreboard of the macroeconomic imbalances procedure (MIP), and support the assessment of vulnerabilities and interconnectedness for financial stability purposes by the European Systemic Risk Board (ESRB). They are the backbone for analysis of financial cycles by e.g. BIS and are essential for understanding and analysing the connection between financial conditions and the real economy.

At national level the financial accounts are used by the Economic Model department at Statistics Denmark for performing various analysis and economic research. Within the monetary policy area of central banks, the national financial accounts are essential for a proper understanding of the transmission of monetary and financial shocks through to the real economy.

C.2 *CoP12 Accuracy and reliability / PC12 Accuracy and reliability (including stability)*

C.2.1 Accuracy and reliability

The financial accounts are checked during and after every production cycle regarding quality and plausibility by the compilers. The accuracy, reliability and stability of the financial accounts depend highly on the primary data sources. No quantitative measuring of reliability is performed at the national level. Because of the number of consistency checks, data confrontations and comparisons with the non-financial accounts facilitated by the system of accounts, the overall accuracy is considered to be relatively high.

C.2.2 Internal consistency

The national financial accounts are compiled within a consistent framework. By construction, there are no discrepancies between assets and liabilities. The consistency between outstanding amounts, transactions, revaluations and other changes in volume are ensured. The financial accounts data transmitted to Eurostat and ECB are internally consistent, as validations checks (such as horizontal consistency checks) are performed before sending the data.

C.3 *CoP13 Timeliness and punctuality / PC13 Timeliness (including punctuality)*

C.3.1 National requirements

The first version of the quarterly financial accounts is published 90 days after the end of the quarter. In connection with the publication of the 4th quarter at the end of March, the first version of the annual financial accounts will also be published. The final quarterly and annual financial accounts are issued two and a half years after the reference period.

The statistics are usually published without delay in relation to the pre-announced dates of publication.

C.3.2 International requirements

In the EU, the ESA 2010 transmission program requires reporting of annual data at t+9 months.

C.4 *CoPI4 Coherence and comparability / PCI4 Consistency and comparability*

C.4.1 External consistency

In theory, the net lending/net borrowing of the non-financial sector accounts (B.9) should be equal to the net lending/net borrowing of the financial accounts (B.9F). In practice, because of the different data sources compiled, discrepancies can be observed. The discrepancies are being monitored by both compilers of financial and non-financial accounts, in search for potential improvements in the underlying statistics. Those discrepancies are put to zero in all sectors, and are not shown, as transactions in the financial accounts are adjusted to improve vertical consistency with non-financial accounts (see table Data source map for financial accounts). This external consistency is secured in the same manner for both the quarterly and annual financial accounts.

The following table gives an overview of the reconciliation practice.

Vertical reconciliation adjustments in financial and non-financial sector accounts, summary table

	Adjustments to improve vertical consistency	Adjustments to:			Target for maximum difference of net lending/net borrowing between financial and non-financial accounts (4-quarter sums / annual data).				Reconciliation every quarter
		Sectors	Financial transactions	Non-financial transactions	Non-financial corporations (S.11)	Financial corporations (S.12)	Households including NPISHs (S.1M)	Rest of the world (S.2)	
Denmark	Yes	S.11, S.1M	F.89, F.512, F.519		0	0	0	0	Yes

The annual and quarterly financial accounts are consistent with BoP and QFAGG.

C.4.2 Time and back data consistency

Annual tables cover the time period from 2017 onwards, while quarterly tables cover from the 1st quarter 2017 onwards. The periods stated here relate to the result of the use of the common IT compilation system for financial accounts, which has been developed in collaboration between Danmarks Nationalbank and Statistics Denmark.

Annual data, based on other sources and methods, are available in Statistics Denmark from 2016 back to 1995.

Quarterly data, based on other sources and methods, are available at Danmarks Nationalbank from last quarter of 2016 back to the first quarter of 2005.

It is the ambition that Statistics Denmark and Danmarks Nationalbank will work together to establish time consistent back data for the full periods back to 1995 and 1st quarter of 2005 respectively.

C.4.3 Consistency across frequencies

Historically, Statistics Denmark has been responsible for compiling the national accounts' annual financial accounts, while Danmarks Nationalbank has been responsible for the quarterly financial accounts. Both statistics have for many years been aligned with the non-financial national accounts, but there has existed significant discrepancies between the quarterly and annual financial accounts.

For years DN and DS have strived to achieve full consistency between the quarterly and annual financial accounts. Against this background in 2019, DN and DS established a collaborative project on a common IT system for the preparation of the national accounts' financial accounts. The establishment of a joint IT system was seen as the best way to effectively ensure coordination and consistency in practice.

The joint IT system has now been established based on the best experiences of DN and DS, and the project also involved a reconsideration of the data source basis for financial accounts, prioritization between sources and the rules for reconciliation. Thus, the data transmission 30 September 2020 is the first data transmission, where quarterly and annual financial accounts are consistent for the period from 2017 to 2019.

C.5 *CoP15 Accessibility and clarity / Pc15 Accessibility and clarity*

C.5.1 Data

The statistics are published in Statistics Denmark's statistical bank under the topic National accounts and public finances in the following tables:

** Annual national accounts, the total economy ** ** Financial wealth and debt, the total economy ** · [NAHFK](#): The national accounts' financial accounts, the entire economy by account, balance sheet and financial instrument

** Annual national accounts, sectors ** ** Financial assets and liabilities, sectors ** · [NASFK](#): National accounts' financial accounts, by sector, account, balance sheet and financial instrument and counterpart sector

** Quarterly national accounts, the total economy ** ** Financial wealth and debt, the total economy ** · [NKHFK](#): The national accounts' financial accounts, the entire economy by account, balance sheet and financial instrument

** Quarterly national accounts, sectors ** ** Financial assets and liabilities, sectors ** · [NKSFK](#): National accounts' financial accounts, by sector, account, balance sheet and financial instrument and counterpart sector

** Released versions of the national accounts ** ** Financial accounts ** · [VNASFK](#): The national accounts' financial accounts by version, sector, account, balance sheet and financial instrument and counterpart sector · [VNKSFK](#): National accounts' financial accounts

The quarterly financial accounts can also be found on the website of Danmarks Nationalbank: http://www.nationalbanken.dk/en/statistics/find_statistics/Pages/Financial-accounts---Quarterly.aspx.

The national financial accounts data are also available through the website of different international institutions.

Eurostat: <http://ec.europa.eu/eurostat/data/database>

OECD: http://stats.oecd.org/Index.aspx?DataSetCode=FIN_IND_FBS#

C.5.2 Metadata

Further information about financial accounts statistics are available on the following website of Danmarks Nationalbank: http://www.nationalbanken.dk/en/statistics/find_statistics/Pages/Financial-accounts---Quarterly.aspx.

C.5.3 Contact

Danmarks Nationalbank: Robert Wederkinck – rwe@nationalbanken.dk

Statistics Denmark: Ivanna Blagova – ibl@dst.dk