



THE BOP/ITS DATA STRUCTURE DEFINITION FOR SDMX

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OECD STATISTICS DIRECTORATE
BETTINA.WISTROM@OECD.ORG



BOP DSD -Outline

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4. Structure of the BOP DSD
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7. ITS times series keys in BOP DSD
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9. Current status of BOP DSD



1. What is SDMX and why use it?

- **S**tatistical **D**ata and **M**etadata e**X**change
- Global standard for statistical data and metadata access and exchange
- ISO standard - adopted at level of UNSC
- Standard for both content and technology
- Sponsored by seven international organizations (IMF, World Bank, UNSD, Eurostat, BIS, ECB & OECD)





1. What is SDMX and why use it?

SDMX should allow to:

- avoid duplication and enhance efficiency in the transfer of data between systems,
- reducing the reporting burden of national agencies;
- ensure the consistency of data disseminated by different international organisations
- and the efficient use of resources.





2. Why SDMX for BOP?

- Move away from the situation where the same data are transmitted in different formats to different international organizations
- Contexts: move to new Standards for BOP
BPM6 and FDI: BD4.

Goals:

- to have one standard format—SDMX—that can be used by all organizations
- To streamline IO data collections



Use of SDMX for OECD countries (survey in 2012)

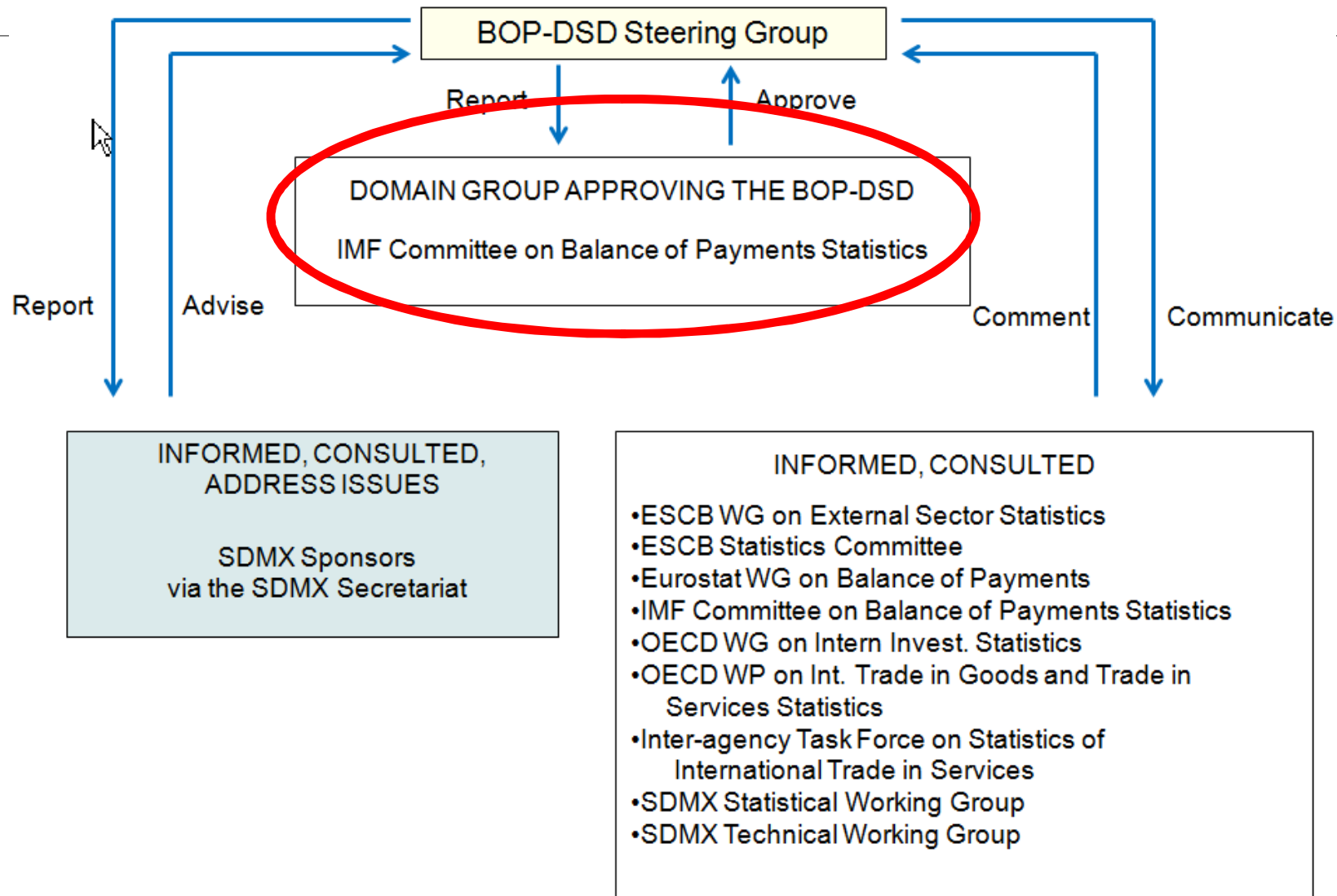
- 20 countries confirmed their intention of using the SDMX formats for transmission of the BOP data.
- Six countries do not plan to do so, at least for the moment.
- Other countries did not indicate their intentions.



3. Governance structure for the BOP-DSD

- BOP DSD Steering Group members: **Eurostat, ECB, IMF.**
- Technical group: Eurostat, ECB, BIS, IMF and OECD .
- *Technical group* designed 2 DSDs:
 - BOP DSD includes 16 Dimensions, 13 attributes
 - FDI DSD includes 18 dimensions, of which 11 are common with the BOP DSD, and 13 attributes

3. Governance structure for the BOP-DSD (2/2)





4. Structure of the BOP DSD

- The Balance of Payments Data Structure Definition (BOP-DSD) includes 16 dimensions and 13 attributes.
- Dimensions are used to uniquely identify a time series and, when joined together, they provide the “time series keys” which is the unique identifier for a time series.
- When defining a time series key using SDMX, a valid code must be assigned to each dimension of the DSD.





4. Structure of BOP DSD: The BOP-DSD V0.2 – 16 Dimensions

BOP DSD dimensions	Annual Trade in services by partner
1. Frequency	Periodicity: code A
2. ADJUSTMENT	N
3. REF_AREA	Declaring country ISO 3166
4. COUNTERPART_AREA	Par. Country ISO 3166
5. REF_(institutional) SECTOR	Total economy
6. COUNTERPART_SECTOR	Total economy except for Total services transactions between related enterprises
7. FLOW_STOCK_ENTRY	Transaction ; code T
8. ACCOUNTING_ENTRY	Credit, debit, balance.



4. Structure of BOP DSD : The BOP-DSD V0.2 – 16 Dimensions

BOP DSD dimensions	Trade in services
9. INT_ACC_ITEM	Services, transport...
10. FUNCTIONAL_CATEGORY	Constant: _Z
11. INSTR_ASSET	Constant: _Z
12. MATURITY	Constant: _Z
13. UNIT_MEASURE	National Currency, USD
14. CURRENCY_DENOMINATION	Constant: _T
15. VALUATION	Unspecified _X
16. COMP_METHODOLOGY	National

_Z: Not applicable

_T: All

N: National methodology.



4. The BOP-DSD V0.2 13 Attributes

provide qualitative and descriptive information on the data

- I. Time format
- II. Observation status
- III. Confidentiality Status
- IV. Pre-break value
- V. Comments to the observation value
- VI. Detailed description (title complement)
- VII. Short title
- VIII. Unit multiplier
- IX. Decimals
- X. Time period collection
- XI. Reference period detail
- XII. Compiling organisation
- XIII. Underlying compilation



5. Examples of code lists





5. Cross domain code list: Frequency

BOP Data Structure Definition - V1.0	
Frequency code list -- CL_FREQ	
Code	Description
A	Annual
B	Daily - Business Week
D	Daily
H	Hourly
M	Monthly
N	Minutely
Q	Quarterly
S	Half-yearly, semester
W	Weekly





5.SDMX Content oriented Guidelines - annex 2 recommendation for CL_Area

- The recommended code list for the CL_AREA comprises:
 - Individual countries (**ISO 3166-1-alpha-2 code**):
- http://www.iso.org/iso/english_country_names_and_code_elements

Recommended code value	Recommended code description	Annotation	
AF	AFGHANISTAN		
AX	ÅLAND ISLANDS		
...			
ZW	Zimbabwe		





5. Shared code list :Area code list –CL area

BOP Data Structure Definition - V1.0			
Area code list -- CL_AREA			
Institution using the code	Code	Description	Integrity Rules
Eurostat, OECD_FDI	A8	Latin America	AR + BO + BR + CL + CO + CR + CU + EC + GT + HN + MX + NI + PA + PE + PY + SV + UY + VE (18 countries)
Eurostat	A84	Latin American NICs of the second wave of industrialization	AR+BR+CL+MX (4 countries)
IMF	A9	Latin America & Carribean	AI + AG + AR + AW + BS + BB + BZ + BO + BR + VG + KY + CL + CO + CR + CU + DM + DO + EC + SV + FK + GD + GP + GT + GF + GY + HT + HN + JM + MQ + MX + MS + AN + NI + PA + PY + PE + PR + KN + LC + VC + SR + TT + TC + UY + VE + A99
IMF	A99	Latin America & Carribean not allocated	
	AD	Andorra	
	AE	United Arab Emirates	
IMF	AE1	Abu Dhabi	
IMF	AE2	Dubai	
	AF	Afghanistan	
	AG	Antigua and Barbuda	



6. Alignment with National accounts DSDs





Alignment of the DSDs

- Some BOP/FDI DSD concepts overlap with those used in National accounts statistics
- These codes have been harmonised as far as possible across BOP and NA
- These code lists are exhaustive may include codes required for NA but not for BOP.
- Longer code lists promote consistency of coded information and sharing of data.





6. Cross domain code lists in common with National Accounts:

Code list ID	Concept(s)
CL_CONF_STATUS	Confidentiality Status
CL_CURRENCY	Currency of denomination
CL_DECIMALS	Decimals
CL_FREQ	Frequency
CL_OBS_STATUS	Observation status
CL_TIME_FORMAT	Time format
CL_UNIT_MULT	Unit multiplier





6. Shared code lists with national Accounts

Code list ID	Concept(s)	Used by	Comment
CL_AREA	Reference country or area Counterpart country or area	BOP, FDI, NA	Geographic areas extended by aggregates
CL_UNIT	Unit of measure	BOP, FDI, NA	Currencies extended by some statistical units





6. Order of the dimensions aligned with NA DSDs

	Q	N	AT	WI	S1	S1	T	A	FA	P	F3	T										ZZZ	T	M	N		
BOP	FREQ	ADJ.	REF AREA	COUNT AREA	REF SECTOR	COUNT. SEC	FLOW_STOCK	ACC. ENTRY	MAI	FUNC CAT	INSTRUMENT_ASSET	MATURITY										UNIT MEAS.	CURR DENOM	VAL	COMP. METH		
FDI	FREQ	MEASURE PRINCIPLE	REF AREA	COUNT AREA	REF SECTOR	LEVEL COUNT ERPART	FLOW_STOCK	ACC. ENTRY	MAI	FUNC CAT	INSTRUMENT_ASSET	TYPE OF ENTITY										UNIT MEAS.	FDI RELATIONSHIP	VAL	STATISTICAL UNIT	ECONOMIC ACTIVITY	ACTIVITY ALLOCATION

NA Ordering

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	21	22	23	24	20	25
NA-ALL	FREQ	ADJ.	REF AREA	COUNT AREA	REF SECTOR	COUNT. SEC	CONSO LIDATION	ACC. ENTRY	STO	INSTRUMENT_ASSET	MATURITY	ACTIVITY	ACTIVITY_TO	PRODU CT	PRODU CT_TO	EXPEND ITURE	PENSIO N_MAN AGER	PENSIO N_CLAI MANT	PENSIO N_FUN DTYPE	UNIT MEAS.	CURR DENOM	VAL	PRICES	TRANSF ORMATION	CUST_B REAKDO WN
NA-Sectors	FREQ	ADJ.	REF AREA	COUNT AREA	REF SECTOR	COUNT. SEC	CONSO LIDATION	ACC. ENTRY	STO	INSTRUMENT_ASSET	MATURITY					Expendit ure COFOG				UNIT MEAS.	CURR DENOM	VAL	PRICES	TRANSF ORMATION	CUST_B REAKDO WN
NA-Main	FREQ	ADJ.	REF AREA	COUNT AREA	REF SECTOR	COUNT. SEC		ACC. ENTRY	STO	INSTRUMENT_ASSET		ACTIVITY				Expendit ure COICOP				UNIT MEAS.			PRICES	TRANSF ORMATION	
NA-SUIOT	FREQ		REF AREA	COUNT AREA	REF SECTOR	COUNT. SEC		ACC. ENTRY	STO			ACTIVITY	ACTIVITY_TO	PRODU CT	PRODU CT_TO					UNIT MEAS.		VAL	PRICES		
NA-Pensions	FREQ		REF AREA	COUNT AREA	REF SECTOR	COUNT. SEC		ACC. ENTRY	STO	INSTRUMENT_ASSET							PENSIO N_MAN AGER	PENSIO N_CLAI MANT	PENSIO N_FUN DTYPE	UNIT MEAS.					
NA-Regional	FREQ		REF AREA					ACC. ENTRY	STO											UNIT MEAS.		VAL	PRICES		





7. International Trade in services times series keys in BOP DSD





ITS Statistics as part of the balance of Payments.

- Extended Balance of Payments Services Classification (EBOPS) is used to report resident-non resident trade in Services transactions.
- Consistent but more detailed than the BPM6 classification.





EBOPS more detailed than BPM6: Charges for the use of intellectual property

Charges for the use of intellectual property n.i.e.	SH
Franchises and trademarks licensing fees	SH1
Licences for the use of outcomes of research and development	SH2
Licences to reproduce and/or distribute computer software	SH3
Licences to reproduce and/or distribute audio-visual and related products	SH4
Licences to reproduce and/or distribute audio-visual products	SH41
Licences to reproduce and/or distribute other Products	SH42





Complementary groupings

Complementary groupings	
Audio-visual transactions	S1
Of which: C.1.1 Licences to use audio-visual products	S1Z
Cultural transactions	S2
Computer software transactions	S3
Of which: C.3.1 Licences to use computer software products	S3Z
Call-centre services	S4
Total services transactions between related enterprises	S (Counterpart sector : affiliates – S1A)
Total trade-related transactions	S6
Environmental transactions	S7
Total health services	S8
Total education services	S9



Domain specific code list: International accounts

EBOPS components	Code	Description	Integrity Rule
EBOPS Compon.	S	Services	$S=SA+SB+SC+SD+SE+SF+SG+SH+SI+SJ+SK+SL+SN$
EBOPS Compon.	SA	Services: Manufacturing services on physical inputs owned by others	
EBOPS Compon.	SAY	<i>Services: Goods for processing in reporting economy – Goods returned , Goods received</i>	
EBOPS Compon.	SAZ	<i>Services: Goods for processing abroad - Goods sent , Goods returned</i>	
EBOPS Compon.	SB	Services: Maintenance and repair services n.i.e.	
EBOPS Compon.	SC	Services: Transport	$SC=SC1+SC2+SC3+SC4$
EBOPS Compon.	SC1	Services: Sea transport	$SC1=SC11+SC12+SC13$
EBOPS Compon.	SC11	Services: Sea transport; Passenger	





An example of an EBOPS time series key

- A ; N ; US ; FR ; S1 ; S1 ; T ; C ; SC ; _Z ; _Z ; _Z ; USD ; _T ; _X ; N
- 1. annual Frequency “A”;
- 2. No **adjustment indicator** “N”;
- 3. the **Reference country** is the United States “US”;
- 4. the **counterpart country** is France “FR”;
- 5. the **reference sector** is the total economy “S1”;
- 6. the **counterpart sector** is the total economy “S1”; “S1A” should be used for trade between related parties.
- 7. the **Flows and stocks indicator** dimension indicates a Transaction “T”
- 8. the **accounting entry** dimension indicates a credit entry “C”;
- 9. the **international accounts** indicates transport services “SC”;
- 10. the **functional category** is not applicable “Z”;
- 11. The **Instrument and assets classification** is not applicable “Z”;
- 12. the **maturity** is not applicable “Z”;
- 13. The **Unit of measure** is US dollar “USD”;
- 14. the **currency of denomination** is set to “All currencies of denomination” _T;
- 15. the **Valuation** is unspecified _X;
- 16. the **compilation methodology** is National “N”.





Streamlining IO data requests

- The SDMX artefacts for the BOP DSD include coded dataflows requested from the ECB, EUROSTAT, IMF, OECD:
- **MBOP**: Monthly **flows** of the Balance of Payments. Data are to be reported to the ECB and Eurostat.
- **QBOP**: Quarterly **flows** of the Balance of Payments. Data are to be reported to the ECB, Eurostat, IMF and OECD.
- **QIIP**: Quarterly **end-of-period** data for the International Investment Position
- **CHVL, CHPR, OTHC**: respectively, monthly and quarterly changes due to: **exchange rate evaluation, price changes** and **other changes**. Data are to be reported to the ECB and Eurostat.
- **RASS**: monthly **end-of-period** data for the template on reserve assets.
- **AITs**: **Annual Report on International Trade in Statistics. Eurostat and OECD**
- **IMF-CPIS**: includes data to be reported for the Coordinated Portfolio Investment survey, with distinction between assets and liabilities. To be reported to the IMF.





Streamlining IO data requests

BPM6 item	Credit
EUROSTAT AND OECD REQUIREMENT	
Services	A.N.#.%.S1.S1.T.C.S._Z._Z._Z.\$._T._X.N
Manufacturing services on physical inputs owned by others	A.N.#.%.S1.S1.T.C.SA._Z._Z._Z.\$._T._X.N
Goods for processing in reporting economy – Goods returned , Goods received	A.N.#.%.S1.S1.T.C.SAy._Z._Z._Z.\$._T._X.N
Goods for processing abroad – Goods sent , Goods returned	A.N.#.%.S1.S1.T.C.SAz._Z._Z._Z.\$._T._X.N
Maintenance and repair services n.i.e.	A.N.#.%.S1.S1.T.C.SB._Z._Z._Z.\$._T._X.N
Transport	A.N.#.%.S1.S1.T.C.SC._Z._Z._Z.\$._T._X.N
Sea transport	A.N.#.%.S1.S1.T.C.SC1._Z._Z._Z.\$._T._X.N
Passenger transport by sea	A.N.#.%.S1.S1.T.C.SC11._Z._Z._Z.\$._T._X.N
Freight transport by sea	A.N.#.%.S1.S1.T.C.SC12._Z._Z._Z.\$._T._X.N
Other	A.N.#.%.S1.S1.T.C.SC13._Z._Z._Z.\$._T._X.N
Air transport	A.N.#.%.S1.S1.T.C.SC2._Z._Z._Z.\$._T._X.N
Passenger transport by air	A.N.#.%.S1.S1.T.C.SC21._Z._Z._Z.\$._T._X.N
Freight transport by air	A.N.#.%.S1.S1.T.C.SC22._Z._Z._Z.\$._T._X.N
Other	A.N.#.%.S1.S1.T.C.SC23._Z._Z._Z.\$._T._X.N
Other modes of transport	A.N.#.%.S1.S1.T.C.SC3._Z._Z._Z.\$._T._X.N
Passenger	A.N.#.%.S1.S1.T.C.SC31._Z._Z._Z.\$._T._X.N
Freight	A.N.#.%.S1.S1.T.C.SC32._Z._Z._Z.\$._T._X.N
Other	A.N.#.%.S1.S1.T.C.SC33._Z._Z._Z.\$._T._X.N
Postal and courier services	A.N.#.%.S1.S1.T.C.SC4._Z._Z._Z.\$._T._X.N



Current status of the DSDs

- **BoP DSD and FDI DSD have been approved by the IMF's BoP Committee (mid-2013) and OECD WPGIIS**
- **Next: Decision on the maintenance agency and change management procedures.**



COMMUNICATING THE FINAL BOP-DSD TO COUNTRIES

- The DSD in Excel format will be posted on the SDMX website (www.SDMX.org) with a link to the DSD URL, together with Guidelines and additional documentation, such as the coded examples.
- In addition, the BOP-DSD and associated code lists is available from the IMF sandbox Registry <http://imf.sdmxsandbox.org/FusionRegistry/>, which has been used during the test implementation of the BOP-DSD.
- This is a temporary measure until the **SDMX Global Registry** is available later in 2013.





Thank you...

Any Questions?

Bettina.Wistrom@oecd.org

