



Work at the BIS on climate change-related issues

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* The views expressed are those of the presenter and do not necessarily reflect those of the BIS.

Agenda

- **What is the BIS and what does it do in the climate risk space?**
 - Policy work, data initiative, technology
- **Past and future policy work, including statistical initiatives**
- **Aspects related to technology**
 - Role for standardisation, data exchange, technology
 - Synergies with other ongoing initiatives

Main functions of the BIS

- **Oldest international financial institution, established in 1930**
 - 63 member central banks, internal staff of 600 (1300 with external)
- **Forum for international monetary and financial cooperation**
 - Regular meetings of senior central bankers
 - Standard-setting bodies for the global financial system
- **Bank for central banks**
 - Offers banking services for its member central banks
- **Forum for responsible innovation and knowledge sharing**
 - New role related to digital and financial innovation (BIS Innovation Hubs)



BIS work on climate related risk

- **Policy work (including by hosted institutions), focussing on financial stability**
 - BCBS, CGFS, MC, IAIS, FSB
- **Initiatives related to statistics**
 - Work by the Irving Fisher Committee on sustainable finance data
 - Support of DGI3 and NGFS
 - In-house initiatives to establish data for BIS needs, also shared with NGFS
- **Broader contributions to discussions on climate risk and finance**
 - Input to senior fora (bi-monthly, regional meetings) and G20 (SFWG)
 - Green Swan conferences since 2021
- **BIS launched Green Bond Funds starting in 2019 for its members**

Standard setting work (focus on recent developments)

● **BCBS/FSI**

- (BCBS) [Principles for the effective management and supervision of climate-related financial risks \(June 2022\)](#)
- (BCBS) [FAQ on climate related financials risks \(Dec 2022\)](#)
- (FSI) [The regulatory response to climate risks: some challenge](#)

● **IAIS**

- [Key theme within the IAIS Strategic Plan](#), including w.r.t. financial stability risk assessment, developing supervisory and supporting material and capacity building

● **FSB**

- [FSB roadmap for addressing climate-related financial risks \(July 2021\)](#)
 - Focus on disclosure (TCFD/ISSB – going back to 2015), data, vulnerability analysis and regulatory/supervisory practices

Other recent policy initiatives

- **Work by the Irving Fisher Committee on Central Bank Statistics (IFC)**

- Past work

- [Overview of sustainable finance data needs and availability for central banks](#) (IFC report, Dec 2021)
- [International Conference on "Statistics for Sustainable Finance"](#), jointly organised with Bank of France and Deutsche Bundesbank (Sep 2021)

- Forthcoming work

- ISI WSC session
- Support of the new G20 data gaps initiative (DGI-3), collecting feedback from IFC members on the status quo of their initiatives on climate risk data and policy recommendations

- **Joint work with NGFS**

- Eg BIS-NGFS Climate and Environmental Risks Online Course 2023

Findings of IFC on sustainable finance

- [Link to paper and data dashboard](#) (with 450 specific indicators used by CBs plus list of core references)
- **Sustainable finance is of growing interest for Central Banks**, although stances vary widely
- **Central Banks** are perceived as **key stakeholders for sustainable finance policies**
- **Central Banks' data needs are closely linked to their core mandates** - prudential and financial stability analysis, asset/reserve management and monetary policy
- **Environmental indicators are most relevant at current juncture**, while the use of social and governance indicators is more limited so far
- **Data challenges:**
 - **Missing taxonomies /regulation lead to data gaps / data issues**
 - Macro data available, but substantial **gaps with respect to granular firm level data**
- **Solutions to close data gaps:**
 - Coordination within public sector and cooperation with all stakeholders (private sector)
 - New data collection initiatives, use of technology

BIS contribution to G20 DGI-3 (launched in 2022, four areas, 5 years)

- Collect feedback from CBs on all recommendations
- Recommendations 1-3 (→ Workshop "*The carbon content of output*", with IMF, Eurostat, Deutsche Bundesbank, Banco Central de Chile and the University of Oxford)
 - Quantify greenhouse gas emissions per unit (resident and ultimate use)
 - Energy accounts (supply and use of energy by economic activity and energy source)
 - Carbon footprint of FDI (potential channel for int. transfer of low-carbon technology)
- Recommendations 4 (green finance): Methodological guidance and more comparable indicators for green bonds and equity finance (→ *Led by international WG Security Databases*)
- Recommendations 5-7
 - Physical and Transition Risk Indicators: to monitor the impact of climate change on the economy/financial system (→ *IFC input explicitly mentioned in DGI outline*)
 - Subsidies: develop comparable indicators on climate-sustaining and climate-damaging government subsidies
 - Develop first estimates of domestic and national climate change mitigation and adaptation current and capital expenditures

BIS Sustainable Bonds Database (for NGFS members and internal purposes)

- Merged vendor data on volumes of sustainable finance, by country, sector, currency, maturity

Sustainable Bonds Database

Overview type

- Totals
- By bond type
- By number of sources
- By HQ country
- By HQ sector
- By currency
- By original maturity
- By remaining maturity
- By weighted average maturity

Frequency

- Monthly
- Quarterly
- Yearly

HQ country group

- (All)
- Advanced economies (excl. EU)
- Emerg. markets and dev. economies
- European Union
- Supranational

Sustainable bond type

- (All)
- Green
- Social
- Sustainability
- Sustainability-Linked
- Transition

Sustainable Bonds Database USD billions

Confidential

Total number of HQs: 3,376

Gross issuance (\$ mln)

Issuance by entity in 2023 (\$ mln)

Sources: Climate Bonds Initiative; Dealogic; Environmental Finance Bond Database; BIS calculations.

Time range: January 2009 to December 2026

Number of top issuers to be displayed (table below): 25

Updated: January, 2023
Data as of: December 31, 2022

Breakdown

- by number of sources
- by HQ country
- by HQ sector
- by currency

Frequency

- Monthly
- Quarterly
- Annual

Class type

- All
- Green
- Social
- Sustainability
- Sustainability-Linked
- Transition

Amounts Outstanding

Gross issuance

Top issuers in 2023 (\$ mln)

Issuer nationality	Issuer sector*	Currency	Class	Rating**	Number of issuers***	Total
(confidential)	(confidential)	USD	Sustainability IG	2	14,999	2,571
(confidential)	(confidential)	EUR	Green	IG	1	2,656
FR	Other financial	EUR	Social	IG	3	2,709
1C	Public	EUR	Green	IG	6	2,670
KR	Other financial	KRW	Social	HY	4	2,756
CN	Bank	CNY	Green	HY	9	2,822
(confidential)	(confidential)	EUR	Sustainability IG	2	9,807	2,751
1C	Public	USD	Green	IG	4	2,822
CN	Bank	CNY	Green	IG	9	2,756
DE	Non-financial	EUR	Green	IG	4	2,809
(confidential)	(confidential)	EUR	Green	HY	1	2,898
(confidential)	(confidential)	USD	Green	IG	1	3,114
(confidential)	(confidential)	EUR	Green	IG	1	3,204
FR	Non-financial	EUR	Green	HY	1	3,232
(confidential)	(confidential)	EUR	Green	IG	1	3,361
(confidential)	(confidential)	EUR	Green	IG	1	3,440
FR	Non-financial	EUR	Green	HY	1	3,512
US	Non-financial	USD	Green	IG	11	119.99
(confidential)	(confidential)	EUR	Green	IG	1	4,560
CN	Non-financial	CNY	Green	HY	45	4,269
IT	Bank	EUR	Green	IG	4	4,077
(confidential)	(confidential)	EUR	Green	IG	1	4,021
(confidential)	(confidential)	USD	Social	IG	1	4,000
US	Public	USD	Green	IG	13	3,567
(confidential)	(confidential)	USD	Social	HY	1	3,268
NL	Bank	EUR	Green	IG	4	3,252
DE	Bank	EUR	Green	IG	5	3,235
(confidential)	(confidential)	EUR	Green	IG	1	3,219

* Public sector comprises supranational entities, central banks and any level of government
** Provided only by Dealogic.
*** One headquarter (HQ) can issue bonds in different currencies, rated or unrated, that meet the requirements of green, social or sustainability labelled bonds. Classification of an aggregate by country and sector is provided

Need help? Try FAQ out or message us at statistics@bis.org

Values in USD billions

March 84.60

114.65

102.89

109.99

119.99

Total
2,571
2,656
2,709
2,670
2,756
2,822
2,751
2,809
2,898
3,114
3,204
3,232
3,361
3,440
3,512

Green Swan conferences

- ["Green swan" risks](#): potentially extremely financially disruptive events that could be behind the next systemic financial crisis (Luiz Awazu Pereira da Silva et al, 2020)
- [2021 conference](#)
 - How in practice can the financial sector take immediate action against climate change-related risks?
- [2022 conference](#)
 - Deeper dive into the topics of (i) monetary policy setting and operations in the context of climate change, and (ii) the role of finance in the climate transition, including transparency and disclosures, transition plans and financing green innovation.
- [2023 conference](#)
 - Climate transition and the real economy

Role for standardisation

- Role for standardisation is a clear priority of policy work (eg 2021 IFC conference)
 - Central banks and financial supervisors have an important role to play in developing sustainable finance statistics, eg facilitating harmonised definitions, taxonomies, standards and methodologies
 - High expectations on ISSB initiative for micro-level data, an area with clear gaps
- BIS has been at the forefront of the development of SDMX standards, along with ECB, Eurostat, IMF, OECD, UN, World Bank
 - [SDMX](#) is an ecosystem of data and metadata exchange standards, related (open source) tools, guidance / learning materials and other resources (eg user fora), established in 2002
 - Aims at standardising and modernising (“industrialising”) the mechanisms and processes for the exchange of statistical data and metadata among international organisations and their member countries

Role for data exchange and technological innovation

- Closing data gaps for green and sustainable finance data will depend on effective cooperation among various stakeholders
 - Central banks and financial supervisors, NSOs, government agencies, international organisations, commercial vendors as well as new providers of alternative data sources
 - Need to have standardised formats and technology to establish comprehensive data at different levels of aggregation
 - XBRL/SDMX compatibility? (eg ESMA collecting data in XBRL, how to integrate into SDMX)
- The use of technology is key
 - IT infrastructure to collect, process, store and disseminate data will need improvements (eg systems need to be prepared for the reporting of (supervisory) data)
 - Project Viridis (SG BIS IHUB): new platform (advanced analytics) to help financial authorities understand the impact climate-related risks may have on financial institutions and financial stability (including in real time)

Conclusion

- A lot of progress has been made towards establishing policies and standards to cope with green and sustainable finance
- But there are many aspects with upside potential:
 - Conceptual clarity on how to measure climate risks and for climate / sustainable finance to effectively contribute to the mitigation of climate risk
 - Closing data gaps, including by (i) improving standardisation of definitions / taxonomies; (ii) use of technology; and (iii) collecting actual data
 - Effective collaboration among stakeholders on all aspects