

JVI's Webinar on new FSIs Guide

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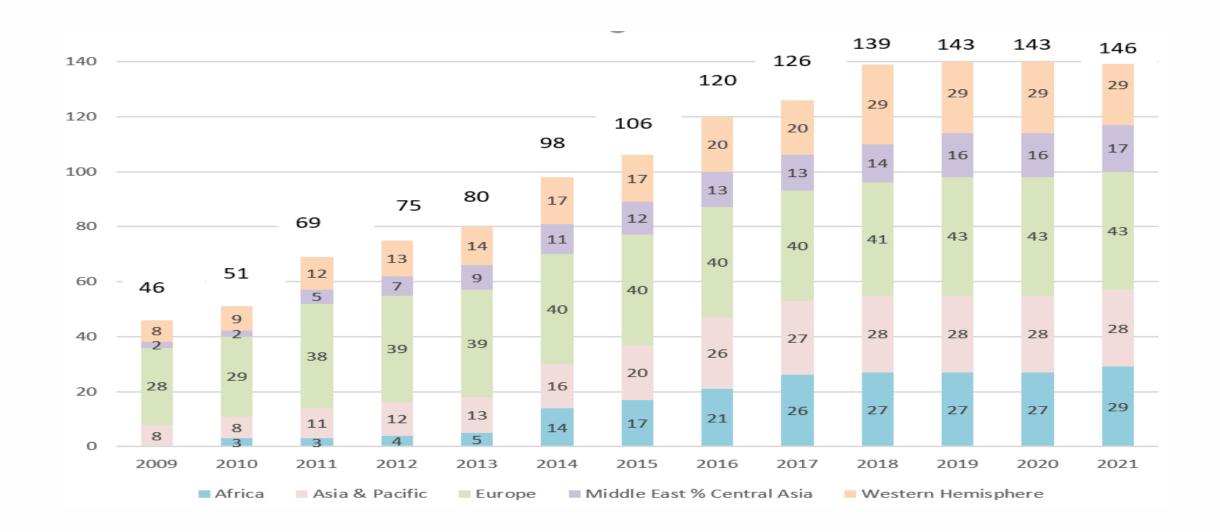
11 November 2021

Overview

- The State of Play
- Factors behind the FSI Update
- FSI: Before and After
- Concentration and Distribution Measures
- Structure of new report forms
- The Migration



Stay of Play: Number of FSI reporters



Why a new FSI Guide?

The global financial crisis

 a recognition of the need to improve our tools to track macro-financial vulnerabilities

The crisis led to reforms in regulatory and accounting standards

- Regulation (Basel III Accord)
- Accounting (IFRS 9)
- And a recognition of the need for/to
 - ▶ indicators to better gauge DT buffers vs. expected and unexpected losses
 - develop new FSIs for Other Financial Corporations (shadow banking)
 - strengthen the FSIs for NonFinancial Corporations and Households

Why a new FSI Guide?

The G20 Data Gaps Initiative (DGI) => monitoring financial risks a priority.

- Recommendation #2:
 - called for a revision of the list of FSIs
- Recommendation #3:
 - called for the IMF to investigate CDM for selected FSIs

FSIs: Before and After

	Before	After
Deposit-takers (DTs)	12 core 13 additional	17 core 12 additional
Other Financial Corporations (OFCs)	2 additional	2 additional
 Money market funds (MMFs) 		2 additional
 Insurance corporations (ICs) 		4 additional
 Pension funds (PFs) 		2 additional
Nonfinancial corporations (NFCs)	5 additional	7 additional
Households (HH)	2 additional	3 additional
Real Estate Markets	4 additional	1 core 3 additional
Market Liquidity	2 additional	
Total	12 core 28 additional	18 core 35 additional

Core FSIs for DTs

Four new FSIs

- CET1 capital to risk-weighted assets
- Provisions to nonperforming loans
- Liquidity coverage ratio
- Net stable funding ratio

One FSI moved from the additional to the core set

Capital to assets (renamed as Tier 1 capital to asset)

Additional FSIs for DTs

One additional

Credit growth to the private sector

One deletion

Net open position in equities to capital

A Closer Look

Income and Expense Statement*
1. Interest income
i. Gross interest income
ii. Less provisions for accrued interest on nonperforming assets
2. Interest expense
3. Net interest income $(=1-2)$
4. Noninterest income
i. Fees and commissions receivable
ii. Gains or losses on financial instruments
iii. Prorated earnings
iv. Other income 1
5. Gross income (= 3 + 4)
6. Noninterest expenses
i. Personnel costs
ii. Other expenses
7. Provisions (net)
i. Loan loss provisions
ii. Other financial as set provisions
8. Net income before taxes $(=5-(6+7))$
9. Income tax
10. Net income after taxes $(=8-9)$
11. Other comprehensive income (loss) net of tax
12. Dividends payable
13. Retained earnings (= $10 - 12$)

*Income and expense statement is reported from beginning of the calendar year to the end of the reporting period.

Balance Sheet
14. Total assets (= 15 + 16 = 23 + 31)
15. Nonfinancial assets
16. Financial assets (= 17 through 22)
17. Currency and deposits
18. Loans (after specific provisions) (= 18.i – 18.ii)
i. Gross loans
i.i. Interbank loans2
i.i.i. Resident
i.i.ii. Nonresident
i.ii. Noninterbank loans
i.ii.i. Central bank
i.ii.ii. General government
i.ii.iii. Other financial corporations
i.ii.iv. Nonfinancial corporations
i.ii.v. Other domestic sectors
i.ii.vi. Nonresidents
ii. Specific provisions ³
19. Debt securities
20. Equity and investment fund shares
21. Financial derivatives
22. Other financial assets
23. Liabilities (= 28 + 29 + 30)
24. Currency and deposits
i. Customer deposits
ii. Interbank deposits ²
ii.i. Resident
ii.ii. Nonresident
iii. Other currency and deposits
25. Loans
26. Debt securities
27. Other liabilities
28. Debt (= 24 through 27)
29. Financial derivatives and employee stock options
30. General and other provisions
31. Capital and reserves
32. Balance sheet total (=23 + 31 = 14)

Memorandum Series

Other series required to calculate FSIs:

Supervisory-based series

- 33. Tier 1 capital less corresponding supervisory deductions
- 34. Common Equity Tier 1 (CET1) capital less corresponding supervisory deductions⁴
- 35. Additional Tier 1 (AT1) capital less corresponding supervisory deductions⁴
- 36. Tier 2 capital less corresponding supervisory deductions
- 37. Tier 3 capital
- 38. Other supervisory deductions⁵
- 39. Total regulatory capital (= 33 + 36 + 37 38)
- 40. Risk-weighted assets
- 41. Basel III total exposure measure
- 42. High-quality liquid assets
- 43. Total net cash outflows over the next 30 calendar days
- 44. Available amount of stable funding
- 45. Required amount of stable funding
- 46. Large exposures

Series that provide a further analysis of the balance sheet:

- 47. Liquid assets
- 48. Short-term liabilities
- 49. Nonperforming loans
- 50. Residential real estate loans
- 51. Commercial real estate loans

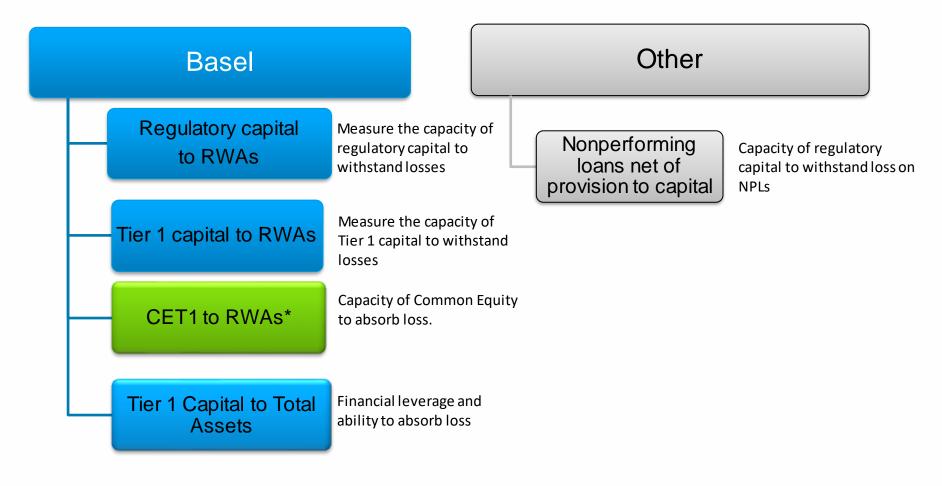
- 52. Geographic distribution of loans
- (i) Domestic economy
- (ii) Advanced economies
- (iii) Emerging market and developing economies
- iii.i. Emerging and developing Asia
- iii.ii. Emerging and developing Europe
- iii.iii. Latin America and the Caribbean
- iii.iv. Middle East and Central Asia
- ii.v. Sub-Saharan Africa
- 53. Foreign currency loans
- 54. Foreign currency liabilities
- 55. Net open position in foreign currency for on-balance-sheet items
- 56. Total net open position in foreign currency
- 57. Credit to the private sector
- 58. Loan concentration by economic activity
- 59. Reference lending rates
- 60. Reference deposit rates
- 61. Highest interbank rate
- 62. Lowest interbank rate

Data series for compiling FSIs: ROA and ROE

- 63. Annualized net income before taxes
- 64. Annualized net income after taxes
- 65. Average total assets
- 66. Average capital and reserves

Capital Adequacy

Analytic value: a gauge of the robustness of financial institutions to withstand shocks to their balance sheets



* New FSI

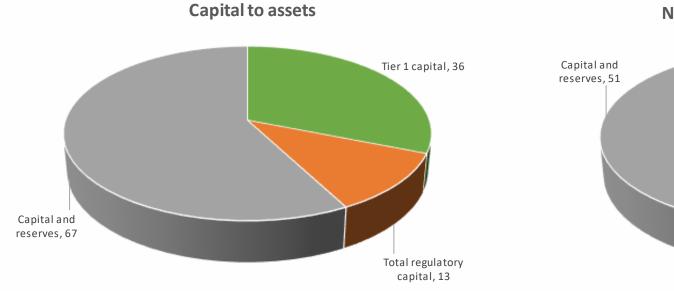
Capital Adequacy: Core

2006 FSI Guide	2019 FSI Guide	
Regulatory capital to risk-weighted assets	Regulatory capital to risk-weighted assets	Numerator: No changeDenominator: No change
Regulatory Tier 1 capital to risk-weighted assets	Regulatory Tier 1 capital to risk-weighted assets	Numerator: No changeDenominator: No change
	CET-1 capital to risk-weighted assets*	Numerator: CET1Denominator: Risk-weighted assets
Capital to assets	Tier-1 capital to assets	 Numerator: Tier 1 capital Denominator: Total assets or Basel III's exposure measures
Nonperforming loans net of provisions to capital	Nonperforming loans net of provisions to capital	 Numerator: Specific provisions (defined as provisions on NPLs). Denominator: Total regulatory capital

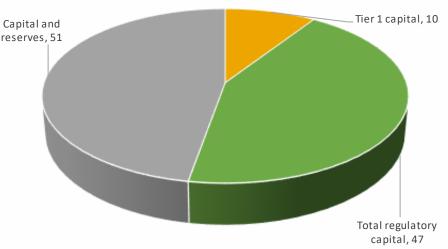
^{*} New FSI

Capital Adequacy

Green indicates prescribed choice of denominator in 2019 FSI guide



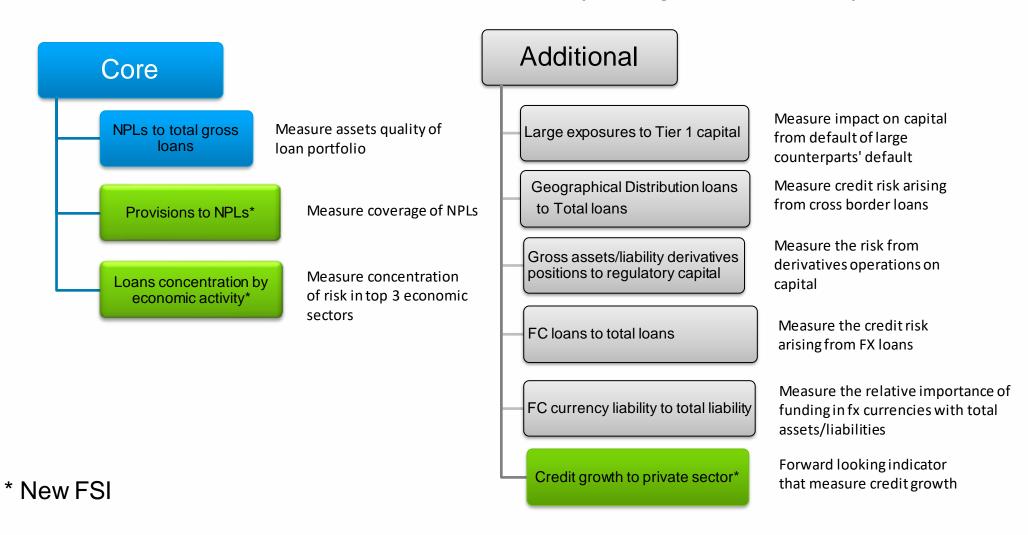




Number refers to number of countries

Asset Quality

Analytic value: a measure of risks to deposit takers' solvency arising from asset quality impairment



Asset Quality: Core

2006 FSI Guide	2019 FSI Guide	Main changes
Nonperforming loans to total gross loans	Nonperforming loans to total gross loans	 Numerator: No change Denominator: No change
	Provisions to nonperforming loans*	 Numerator: Specific provisions (defined as provisions on NPLs). Denominator: NPLs
Sectoral distribution of loans	Loan concentration by economic activity*	 Replaced FSI on loan concentration by economic activity Numerator: Loans to the top 3 economic sectors as per United Nation's International Standard Industrial Classification of All Economic Sector Activities (ISIC) Denominator: Gross loans to nonfinancial corporations

^{*} New FSI

Asset Quality: Additional

2006 FSI Guide	2019 FSI Guide	Main changes
Large exposures to capital	Large exposures to capital	 Numerator: All credit exposures to single or group of related borrowers after deduction of credit mitigants exceeding 10 percent of Tier 1 capital (as defined in the BCBS's framework) Denominator: Tier 1 capital
Geographical distribution of loans	Geographical distribution of loans	 Numerator: WEO regional country classification (October 2019) Denominator: No change
Gross asset position in financial derivatives to capital	Gross asset position in financial derivatives to capital	 Numerator: No change Denominator: Total regulatory capital
Gross liability position in financial derivatives to capital	Gross liability position in financial derivatives to capital	 Numerator: No change Denominator: Total regulatory capital

^{*} New FSI

Asset Quality: Additional

2006 FSI Guide	2019 FSI Guide	Main changes
Foreign-currency denominated loans to total loans	Foreign-currency denominated loans to total loans	Numerator: No changeDenominator: No Change
Foreign-currency denominated liabilities to total liabilities	Foreign-currency denominated liabilities to total liabilities	 Numerator: No change Denominator: No change
	Credit growth to private sector*	 Credit to the private sector includes gross loans extended by DTs to the private nonfinancial sector, plus debt securities issued by private NFCs and held by DTs. The data should be compiled on a domestic consolidated basis. The private sector comprises private NFCs, HHs, and NPISHs. Calculated as the 12 months growth in credit to private sector

^{*} New FSI

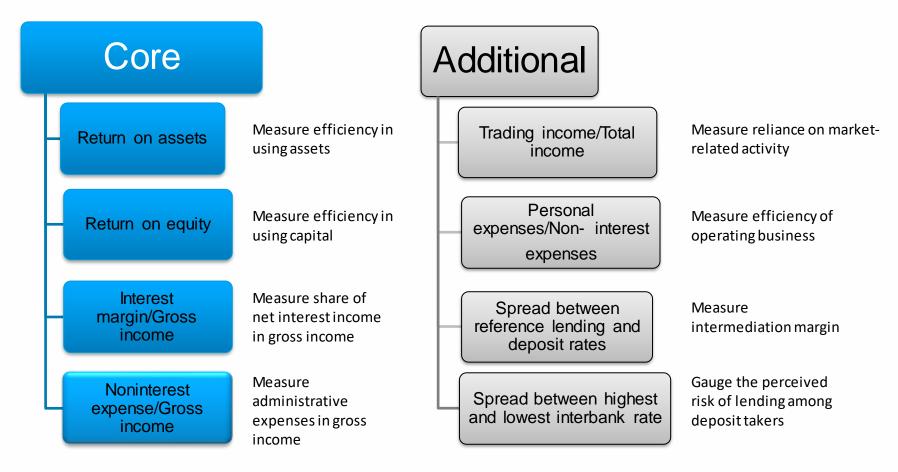
Asset Quality

Green arrow indicates prescribed choice of denominator in 2019 FSI guide



Earnings and profitability

Analytic value: a measure of risks to deposit takers' solvency arising from asset quality impairment



Earnings and profitability: Core

2006 FSI Guide	2019 FSI Guide	Main changes
Return on assets	Return on assets	 Extraordinary items have been phased out in the income and expense statement Numerator: Annualized Net profit before tax Denominator: Average total assets (No change)
Return on equity	Return on equity	 Numerator: Annualized Net profit after tax Denominator: Average capital and reserves
Interest margin to gross income	Interest margin to gross income	 Numerator: No change Denominator: include extraordinary profits (if any)
Non-interest expenses to gross income	Non-interest expenses to gross income	 Numerator: include extraordinary losses (if any) Denominator: include extraordinary profits (if any)

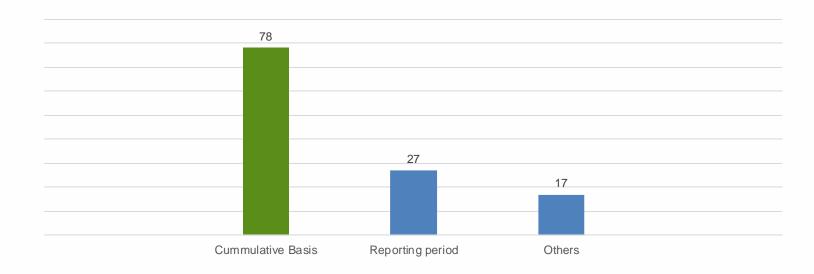
Earnings and profitability: Additional

2006 FSI Guide	2019 FSI Guide	Main changes
Trading income to total income	Trading income to total income	 Numerator: No change Denominator: include extraordinary profits (if any)
Personnel expenses to non-interest expenses	Personnel expenses to non-interest expenses	 Numerator: No change Denominator: include extraordinary losses (if any)
Spread between reference lending and deposit rates	Spread between reference lending and deposit rates	 No change Both numerator and denominator need to be reported
Spread between highest and lowest interbank rate	Spread between highest and lowest interbank rate	 No change Both numerator and denominator need to be reported

Earnings and profitability

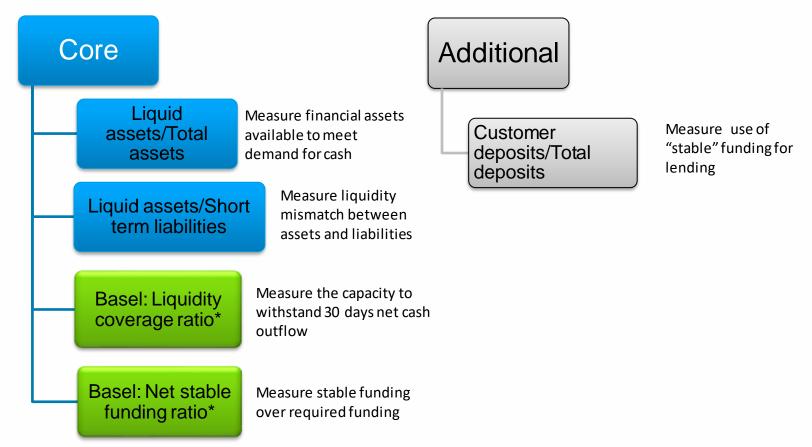
Green is consistent with the 2019 FSI Guide

Income and expense statement



Liquidity

Analytic value: a gauge of deposit takers' ability to meet expected and unexpected demands for cash



^{*} New FSI

Liquidity: Core

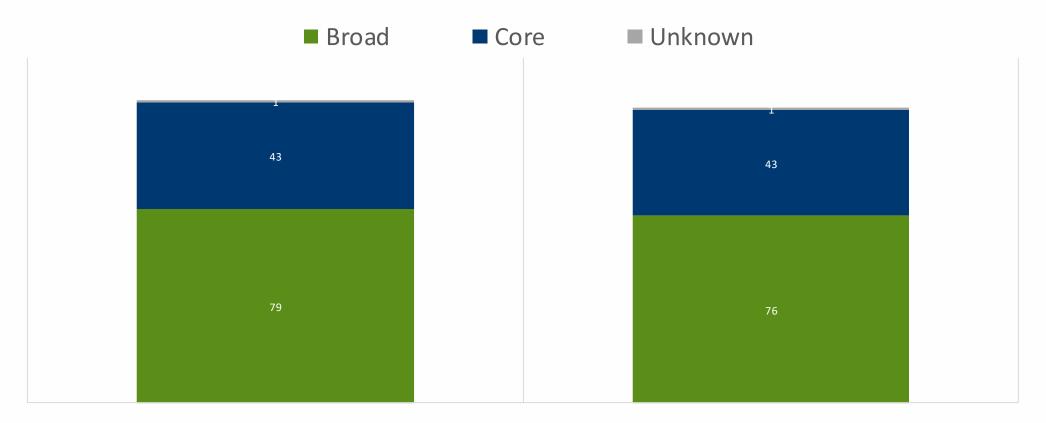
2006 FSI Guide	2019 FSI Guide	Main changes
Liquid assets to total assets	Liquid assets to total assets for all DTs	 Numerator: Broad measure of liquidity assets (The 2019 FSI Guide does not differentiate between core and broad measure of liquidity) Denominator: No change
Liquid assets to short term liabilities	Liquid assets to short term liabilities for all DTs	 Numerator: Broad measure of liquid assets (The 2019 FSI Guide does not differentiate between core and broad measure of liquidity) Denominator: All liabilities with a maturity of not more than 90 days
	Liquidity Coverage Ratio*	 New indicator for DTs under Basel III Numerator: High Quality Liquid Assets (HQLA) Denominator: Net cash outflows
	Net Stable funding Ratio*	 New indicator for DTs under Basel III Numerator: Available amount of stable funding Denominator: Available amount of required funding

Liquidity: Additional

2006 FSI Guide	2019 FSI Guide	Main changes
Customer deposits total deposits	Customer deposits total deposits	 Numerator: include all deposits placed by residents or nonresidents, except those placed by (resident and nonresident) financial corporations, central governments, and central banks Denominator: No change

Liquidity

Green indicates prescribed choice of denominator in 2019 FSI guide

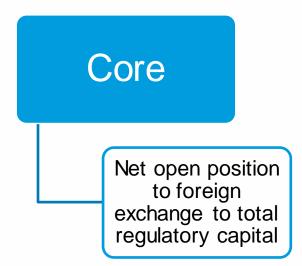


LIQUID ASSETS/TOTAL ASSETS

LIQUID ASSETS/SHORT TERM
LIABILITIES

Sensitivity to Market Risk

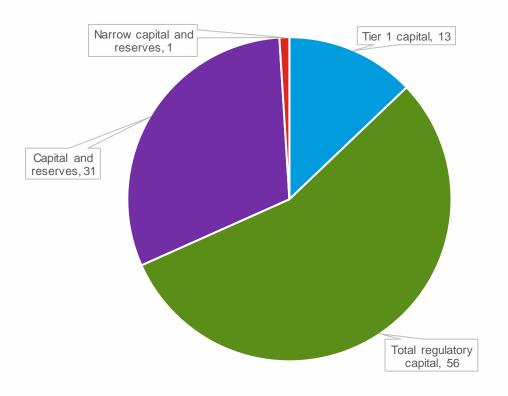
Analytic value: a measure of exposures to market risk



Gauge vulnerability to foreign exchange risk

Green indicates prescribed choice of denominator in 2019 FSI guide

Net open position in foreign exchange to capital



Number refers to number of countries

Sensitivity to Market Risk: Core

2006 FSI Guide	2019 FSI Guide	Main changes
Net open position in foreign exchange to capital	Net open position in foreign exchange to capital	 Numerator: No change (Preferred approach is to use on- and off-balance measure). Denominator: Total regulatory capital

^{*} Deleted from the list of additional FSIs: Net open position in equity to capital

Concentration and Distribution Measures (CDMs)

CDMs

Recommendation II-3 of the Data Gaps Initiative

► The IMF to investigate the possibility of regular collection of CDMs for FSIs. G-20 economies to support the work of the IMF.

Background

- 2014 pilot project: confirmed feasibility of data collection
- ▶ 2017 FSI Workshop: confirmed usefulness and countries' support to the data provision, as additional costs are minimal assuming…
- ▶ FI developed a data compilation tool, in response to countries' request
- ➤ 2017 meeting of the FSI Reference Group provided insights to the selection of FSIs for which CDMs would be reported, with an emphasis on preserving confidentiality of individual reporters

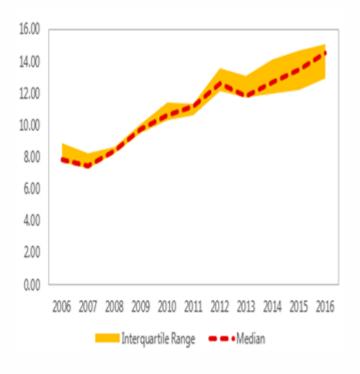
CDMs for Selected Core FSIs for DTs

- For Concentration, the Guide recommends
 - ► The Herfindahl Index
- Various ways to measure dispersion, including variance, standard deviation and quartiles.
- The Guide recommends
- Weighted Quartiles
 - First Quartile (weighted)
 - Second Quartile (weighted)
 - Third Quartile (weighted)
- Weighted Standard Deviation
- Weighted Skewness
- Weighted Kurtosis

CDMs for Selected Core FSIs for DTs

- Solvency Indicator (capital adequacy)
 - ► Tier 1 capital to risk-weighted assets
 - NPLs net of specific provisions to capital
- Asset Quality
 - ► NPLs to total gross loans
 - Provisions to NPLs
- Profitability
 - Return on assets (ROA)
 - Return on equity (ROE)
- Leverage
 - ► Tier 1 capital to total assets

Figure 12.3 Weighted Quartiles for Selected French Banks' Capital Adequacy Ratios (2006–2016)



Source: Fitch Connect and IMF staff calculations.





IMF 2019 FINANCIAL SOUNDNESS INDICATORS COMPILATION GUIDE (2019 FSI GUIDE)



Available on the IMF iPad App



The IMF 2019 Financial Soundness Indicators Compilation Guide (2019 FSI Guide)



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The IMF 2019 Financial Soundness Indicators Compilation Guide (2019 FSI Guide) updates the methodological guidance on the concepts and definitions, data sources and methods for the compilation and dissemination of financial soundness indicators. It includes new indicators to expand the coverage of the financial sector, including other financial intermediaries, money market funds, insurance corporations, pension funds, nonfinancial corporations, and households.

Download PDF

Concentration and Distribution Measure (CDM) Tool

DISCLAIMER:

This Concentration and Distribution Measures (CDMs) tool, for selected Financial Soundness Indicators, is provided to member countries only for their convenience. A key objective of the tool is to facilitate comparability, reproducibility and interpretability of CDMs across the membership. However, individual countries remain solely responsible for their reported CDMs. The IMF makes no representation or warranty of any kind, express or implied, about the tool's completeness, accuracy, reliability, suitability or usability with every system.

FSIs for OFC, NFC and household sectors and real estate market: Before and after

Additional FSIs for OFCs

- OFCs' assets to total financial assets
- OFCs' assets to gross domestic products
- OFC breakdown:
 - Money market funds (2 new indicators),
 - Insurance Corporations (4 new indicators),
 - Pension Funds (2 new indicators), and

Modification to the existing FSIs for OFCs:

- ► "OFC assets as percent of total financial system assets":

 This indicator will be produced for the OFC sector as a whole and for each defined subsector: (i) MMFs; (ii) ICs; and (iii) PFs.
- ► "OFC assets as percent of GDP":

 This indicator will be produced for the OFC sector as a whole and for each defined subsector: (i) MMFs; (ii) ICs; and (iii) PFs.

Additional FSIs for OFCs: MMFs

Sectoral distribution of investments

- Indicates the risk-profile of MMF investments by identifying different types of debtors, provides information on the exposure of these debtors to MMFs as a funding source, and captures a financial link between MMFs and DTs.
- Moreover, changes in the distribution would also capture MMFs' asset reallocations based on yields and/or risk perception.

Maturity distribution of investments

Aims at assessing the level of liquidity by monitoring the asset maturity of the following time intervals: 1-30 days; 31-90 days; and more than 90 days

Additional FSIs for OFCs: Insurance Comp.

The following new indicators for ICs will be added as additional FSIs:

- Shareholders' equity to invested assets
 - Measures the level of capital that is available to meet actual or potential losses from ICs' investments. This is provided separately for life and non-life insurance
- Combined ratio (non-life insurance only)
 - Measures the profitability of a given year's insurance underwriting, calculated as the sum of net incurred losses and underwriting expenses divided by net earned premiums. For non-life insurers operating in a healthy market this ratio should be less than 100.
- Return on equity (ROE—life and non-life) and Return on assets (ROA—life only):
 - Leading indicators for solvency problems,
 - The ROE measures ICs' efficiency in using their capital,
 - ► The ROA measures ICs' efficiency in using their assets.

Additional FSIs for OFCs: Pension Funds

The following new indicators for PFs will be added as additional FSIs:

- Liquid assets to estimated pension payments in the next year
 - This liquidity indicator assesses the adequacy of liquid assets to cover future pension payments.

Return on Assets

▶ This earning and profitability indicator measures the efficiency of PFs in using their assets.

Additional FSIs for NFCs

Current:

- Debt to equity
- Return on equity
- Earnings to interest and principal expenses

Additions

- External debt to equity
- Foreign currency debt to equity
- Total NFC debt-to-GDP
- Earnings to interest expenses

Deletions

- Net foreign exchange exposure to equity
- Number of bankruptcy proceedings initiated

Additional FSIs for Households

The Rationale:

▶ The household sector is another key counterpart sector of the financial sector.

Addition

► Household debt to gross disposable income

2006 FSI Guide	2019 FSI Guide	Main Changes
Household debt to GDP	Household debt to GDP	No change
Household debt service and principal payments to income	Household debt service and principal payments to income	No change
	Household debt to household disposable income	New FSINumerator: House debtDenominator: Household disposable income

FSIs for Real Estate Markets

The Rationale:

Real estate assets are a major element of the wealth of the private sector. To support monitoring the direct exposure to risks arising from real-estate-related lending

2006 FSI Guide	2019 FSI Guide	Changes
Residential real estate prices	Residential real estate prices	Upgraded to the list of core FSIs
Commercial real estate prices	Commercial real estate prices	No change
Residential real estate loans to total loans	Residential real estate loans to total loans	No change
Commercial real estate loans to total loans	Commercial real estate loans to total loans	No change

Additional FSIs for Market Liquidity: Before and After

Current List of FSIs	Updated List of FSIs	Changes
Average bid-ask spread in the securities market		Deleted
Average daily turnover ratio in the securities market		Deleted

The Rationale:

These two indicators on market liquidity are readily available from commercial sources in most countries on high frequency.

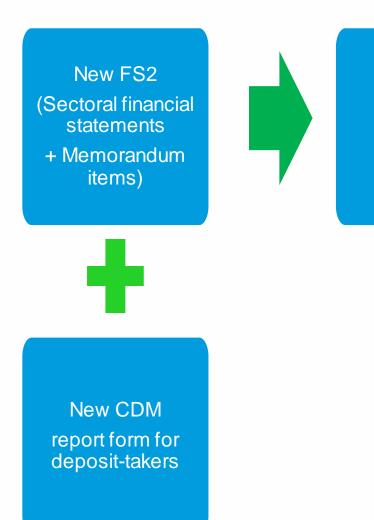
New FSI Reporting and migration

New FSI report forms

The objective is to derive the FSIs from underlying financial statements (FSIs) for all countries



New FSM (Metadata)



Financial

Soundness

Indicators

The way forward

4. Implementation of the new FSI-SRs and metadata will start in December 2021/January 2022 (Beginning of the transition period)

3 Two weeks before launching date, countries will be given the opportunity to make changes to their data and metadata using the new report forms

2. Deadline for returning option form 15 September 2021 (extended to 15 October 2021)

1. Countries were informed of Implementation of new templates in July 2021



New FSI report forms are implemented in 2022

Appendix

Additional FSIs for OFCs: Before and After

	2006 FSI Guide	2019 FSI Guide	Main Changes
OFC and subsectors	OFCs' assets to total financial assets	OFCs' assets to total financial assets and subsectors	 Modified Numerator: Total assets of OFC and subsectors: MMF, IC and PC Denominator: Total financial system assets comprising DTs, MMF, IC, PF and other OFC subsectors (that is excluding total assets of central banks)
	OFCs' assets to gross domestic products	OFCs' assets to total financial assets and subsectors	 Modified Numerator: Total assets of OFC and subsectors: MMF, IC and PC Denominator: GDP (No change)
Money Market Funds		Sectoral distribution of investments	 New FSI Numerator: sectoral distribution of investment Denominator: Total investments
		Maturity distribution of investments	New FSINumerator: Maturity of investmentsDenominator: Total investments

Additional FSIs for OFCs: Before and After

	2006 FSI Guide	2019 FSI Guide	Main Changes
		Shareholder equity to total invested assets	 New FSI Numerator: Capital and reserves Denominator: Total invested assets
Insurance Corporations		Combined ratio, for non-life insurance	 New FSI Numerator: Net claims and underwriting expenses Denominator: Net premium earned
		Return on assets, for life insurance	 New FSI Numerator: Annualized Profit before tax Denominator: Average total assets
		Return on equity, for life and non-life insurance	 New FSI Numerator: Annualized Profit after tax Denominator: Average capital and reserves

Additional FSIs for OFCs: Before and After

	2006 FSI Guide	2019 FSI Guide	Main Changes
Pension		Liquid assets to estimated pension payments in the next year	 New FSI Numerator: Liquid assets Denominator: Estimated pension payments in the next year
funds		Return on assets	 New FSI Numerator: Annualized Profit before tax Denominator: Average total assets

Additional FSIs for NFCs: Before and After

	2006 FSI Guide	2019 FSI Guide	Main Changes
	Total debt to equity	Total debt to equity	Numerator: No changeDenominator: No change
		Total external debt to equity	 New FSI Numerator: Total debt to nonresident Denominator: Equity (Capital and reserves)
NFCs		Total foreign currency debt to equity	 New FSI Numerator: Total foreign currency debt Denominator: Equity (Capital and reserves)
	Return on equity	Return on equity	Numerator: Profit after taxDenominator: No change
	Earnings to interest and principal expenses	Earnings to interest and principal expenses	Numerator: No changeDenominator: No change
		Earnings to interest expenses	 New FSI Numerator: Earnings before interest and tax (EBIT) Denominator: Interest expenses
	Net foreign exchange exposure to equity		Deleted

Additional FSIs for NFCs: Before and After

	2006 FSI Guide	2019 FSI Guide	Main Changes
	Net foreign exchange exposure to equity		Deleted
NFCs	Number of applications for protection from creditors		Deleted
		NFC debt to GDP	New FSINumerator: Total debtDenominator: GDP