Bank Regulatory by WRDS Manual

WHARTON RESEARCH DATA SERVICES

Table of Contents

Intro	oduct	ion	3
1	Ove	rview of the new Bank Regulatory by WRDS	4
1	. 1	Contents and Coverage	4
1	.2	Background information: Reasons of Rebuilding	4
2	Proc	luct Description, Structure, and Methodology	6
2	. 1	FFIEC Call Reports Data	6
2	.2	NIC Bank Holding Company Financial Data (BHCK Data)	6
2	.3	NIC Bank Structure Data	7
2	.4	Federal Reserve Bank of New York. CRSP-FRB Link	7
2	.5 2.5.1 2.5.2 2.5.3	NIC Bank Holding Company Financials	8 8
3	Tabl	es	10
3	. 1	Common	10
3	.2	FFIEC Call Reports	10
3	.3	NIC Bank Holding Company Financials (BHCK)	12
3	.4	NIC Bank Structure Data	13
3	.5	NY Fed Bank to CRSP Linking table	15
4	Com	nparison with the Legacy Bank Regulatory data	15
4	.1	Comparison Summary	15
4	.2	Maintaining Consistency between Legacy and New Call Data	17
5	Rela	ted Product: Bank Regulatory Premium by WRDS	18
6	Cita	tion Guidelines	19
Refe	erenc	e	21

Appendix A1. Changes in Form-Filing Requirements	. 22
Appendix A2. Filing type code lookup table	. 25
Appendix B. Dataset-Specific Manuals	. 27

Introduction

This manual is designed to provide a comprehensive understanding of the new Bank Regulatory by WRDS. It guides users in exploring the product's offerings and provides references to detailed manuals and definition files for the databases included in the product.

The manual begins with an overview of the new Bank Regulatory by WRDS, introducing the product and its purpose. It then explains the product's components, their organization, and methodology in the 'Product Description, Structure, and Methodology' section.

Next it provides information about the data tables included in the product to help users understanding about the database schema. It also explains how to use the tables. The manual then highlights the similarity and difference between the legacy Bank Regulatory and the new Bank Regulatory data in the comparison section.

Towards the end, the manual offers guidance on how to cite the database in research. Lastly, additional information and resources related to the product are available in the Appendix.

1 Overview of the new Bank Regulatory by WRDS

1.1 Contents and Coverage

The new Bank Regulatory by WRDS is a comprehensive repository of data of banks under US banking Regulation system.

The database encompasses a broad spectrum of financial and structural data, including Commercial Bank Call Report Data from the FFIEC, financials of bank holding companies, and structural data of banks from the National Information Center (NIC).

It covers banks subject to U.S. banking regulations, including domestic banks, U.S. multinational banks, international banks with U.S. branches, and Edge and agreement Corporation¹. In particular, it includes quarterly call reports data (FFIEC Forms 031, 041, and 051) and bank holding company financials (FR Y-9C, Y-9SP, Y-9LP) starting from 2001, the earliest year available from the FFIEC and NIC. It also provides Bank to CRSP linking table by Federal Reserve Bank of New York to facilitate banking research.

Finally, call report data, including bank structure data and bank holding company financials prior to 2001, are still accessible to all users in the 'Legacy Bank Regulatory' data section. Users can also locate FFIEC 002 and FR 2886b data up to 2021 within the legacy bank regulatory data.

1.2 Background information: Reasons of Rebuilding

WRDS has reconstructed the Bank Regulatory database to address structural breaks caused by changes in the legacy bank regulatory data sources in 2011 and 2021.

The legacy Bank Regulatory data was reliant on the Chicago Fed's commercial bank data. However, the Chicago Fed ceased providing Call Reports data (Forms 031, 041, and 051) in 2011 and discontinued the remaining commercial bank data (Bank holding company financials, FFIEC 002, FR 2886b, and structure) in Q2 2021.

¹ Edge and agreement corporation definition: "Edge Act and Agreement corporations are United States corporations carrying out international banking and financing operations, some of which—notably equity investment abroad—the parent banks themselves are not permitted to undertake under existing laws and regulations"

⁽https://www.newyorkfed.org/medialibrary/media/research/monthly_review/1964_pdf/05_3_64.pdf), Examples of active Edge corporations:

Citibank Overseas Investment Corporations (ID RSSD 938019), Wells Fargo International Banking Corporation (ID RSSD 24837)

Due to changes in the Chicago Fed's data provision, WRDS first had to switch the source of Call Reports data from the Chicago Fed to the FFIEC in 2011, resulting in the initial structural break in the data. In 2021, WRDS stopped updating the entire bank regulatory database following the Chicago Fed's discontinuation of bank holding company financials, bank structure data, and other call reports (FFIEC 002 and FR 2886b), leading to another structural break in the Bank Regulatory data.

A significant distinction between the Chicago Fed's call reports data and the FFIEC's version lies in the derived variables. The FFIEC's call reports primarily provide the reported variables from the filing forms, with many calculated variables absent. For instance, the Chicago Fed's call data (pre-2011) included the non-missing foreign and domestic total assets variable (RCFD2170) for domestic banks (Forms 041 and 051 filers), whereas the FFIEC version only provided this variable for large banks with domestic and foreign offices (Form 031 filers). This discrepancy required WRDS legacy Bank Regulatory users to derive additional variables themselves post-2011.

Following the Chicago Fed's cessation of the remaining bank data in 2021, a part of the data (Bank Structure data and Bank Holding Company Financials) became exclusively available from the National Information Center (NIC), featuring a new database schema. The most notable change can be found in the bank structure data which contains detailed information about bank attributes (id, type, address, etc.) and bank hierarchy. Previously, the Chicago Fed supplied structure data combined with call reports data, but the NIC version offers comprehensive bank structure data including relationships and transformations separately from call reports data.

Due to these changes and associated issues, WRDS has redeveloped the banking databases to (1) acquire data from new sources and maintain it more reliably according to the new database schema and (2) address the issue of structural breaks induced in the data. Specifically, (1) is addressed in the newly revamped Bank Regulatory by WRDS covered in this document, and (2) is addressed in Bank Regulatory Premium by WRDS which is a separate product from Bank Regulatory and available with a subscription. For more detailed information about Bank Regulatory Premium by WRDS, refer to Section 5 Related Product.

Furthermore, the new Bank Regulatory data is accessible via PostgreSQL and Python, unlike the legacy data which was not compatible due to an outdated database schema. This issue has been resolved by simplifying the database schema on the WRDS cloud. The new schema is explained in <u>Section 3: Tables</u> and the distinctions between the legacy Bank Regulatory

and the new Bank Regulatory by WRDS are detailed in a table – refer to <u>Section 4:</u> <u>Comparison</u>.

2 Product Description, Structure, and Methodology

Inheriting the legacy Bank Regulatory database, the new **Bank Regulatory by WRDS** includes original call reports data from the FFIEC, as well as financial data of bank holding companies and bank structure data from the NIC, complemented by the Bank to CRSP linking table by New York Fed. Both call reports data and bank holding company financials data date back to 2001. In addition, the **Legacy Bank Regulatory** data remains accessible to all users who want to have longer time series. it contains call reports and bank holding company financials data from 1976 to Q2 2021 mostly obtained from Chicago Fed. Note that the legacy data will not get any update. As stated in the <u>Section 1.2</u>: <u>Background information</u>: <u>Reasons of Rebuilding</u>, the detailed comparison between the legacy Bank Regulatory Data and the new one is delineated in <u>Section 4</u>: <u>Comparison</u>.

2.1 FFIEC Call Reports Data

Call reports data sourced from FFIEC includes FFIEC Form 031, 041, and 051 data from 2001. As of March 2024, FFIEC form 031 is required for large US commercial banks with assets of more than \$100 billion, while forms 041 and 051 are required for smaller US commercial banks with domestic offices only. For more detailed information about the forms, refer to the Fed's reporting forms section (link) or click the links in the table below. This data is updated on a quarterly basis.

Form	Fed Overview Link	FFIEC Information Page
FFIEC 031	<u>Click Link</u>	<u>Click Link</u>
FFIEC 041	Click Link	Click Link
FFIEC 051	<u>Click Link</u>	<u>Click Link</u>

2.2 NIC Bank Holding Company Financial Data (BHCK Data)

Financial data for bank holding companies (BHCK), sourced from the National Information Center (NIC), includes FR Y-9C, FR Y-9SP, and FR Y-9LP reports. The FR Y-9C report is required for domestic bank holding companies (BHCs), savings and loan holding companies (SLHCs), U.S. intermediate holding companies (IHCs), and securities holding

companies (SHCs). FR Y-9SP report is for reporting parent-only financials data of small bank holding companies, while large holding companies are required to file the FR Y-9LP for parent-only numbers reporting. For more detailed information about these reports, refer to the Fed's reporting forms section (link) or click the links in the table below. The data is updated on a quarterly basis.

Form	Fed Overview Link
FR Y-9C	<u>Click Link</u>
FR Y-9SP	<u>Click Link</u>
FR Y-9LP	<u>Click Link</u>

2.3 NIC Bank Structure Data

Bank Structure data contains detailed information about bank attributes, transformation history, and parent-subsidiary relationships among banks and bank holding companies. The data is sourced from NIC and covers all institutions monitored by the Federal Reserve. It also keeps information about closed institutions; therefore, it is useful to track the historical changes of a bank and its corporate structure over time. For attributes, it contains various identifiers, addresses, organization type flags—including charter type codes and BHC indicators—and the duration of an entity's, etc. For more detailed information, visit NIC's data download page (link) or refer to the manual on the data overview and manual section (link). The data is updated quarterly with call reports data and BHCK data.

2.4 Federal Reserve Bank of New York. CRSP-FRB Link

Lastly, the Bank to CRSP linking table, maintained by the New York Fed, is included to enhance user convenience within the WRDS cloud environment. The table contains historical linkages between the bank ID (RSSD9001 or ID_RSSD) covered in the NIC bank attributes database to CRSP PERMCO with an effective date range from June 1986 to September 2023. The linkages are established using name and location matches. For more detailed information about the methodology, visit the New York Fed's data download page (link) or refer to the manual on the data overview and manual section (link). The NY Fed linking table will be updated when new data is available from the source.

2.5 Methodology

In this section, the methodology employed to create and update the datasets included in Bank Regulatory is explained. For methodologies for other datasets not described herein, refer to <u>Appendix B. Dataset-specific Manuals</u>, where links to the methodologies and definitions are provided.

2.5.1 FFIEC Call Reports

The FFIEC Call Reports data, which includes FFIEC Form 031, 041, and 051, is sourced from text files available on FFIEC's bulk data download website. During the revamping process, all bulk data in tab-delimited formats from Q1 2001 to Q3 2023 were downloaded and utilized to reconstruct the Call Reports data starting from 2001. This suggests that the data could include some restated figures, especially for older data. Unfortunately, there is no flag to identify whether a report has been restated. This can only be inferred from the gap between the filing period date and the submission date.

Going forward, the data will be updated quarterly, approximately 1 - 2 weeks after the end of each quarter's submission period, to capture initial reporting given that banks are required to file the initial call reports within 30 days of each calendar quarter-end.

Beginning from the fourth quarter of 2023, we review data from both the current and previous quarters during each quarterly update to ensure that we catch any reports from the previous quarter that were submitted late. The algorithm also detect any reports that have been restated in the current quarter since their initial filing in the previous quarter.

Furthermore, it's crucial to reiterate that the FFIEC's Call Reports data only includes data reported in the Call Reports filings, as stated in <u>Section 1.2 Background Information</u>: Reasons of Rebuilding. This means that some variables, which were derived using the reported variables and available in Chicago Fed's Call Reports data until 2011, are not included in the FFIEC's Call Reports. Refer to <u>Section 4.2</u> for information on how to address this issue, and to <u>Section 5</u> for details about the related product, the Bank Regulatory Premium by WRDS. This suite offers selected derived variables, which are constructed using the new FFIEC Call Reports data from 2001.

2.5.2 NIC Bank Holding Company Financials

Bank Holding Company Financials, which includes FR Y-9C, FR Y-9SP, and FR Y-9LP, are sourced from txt files on the NIC Financial Data Download page. During the revamping process, all data from Q1 2001 to Q3 2023 were downloaded and utilized to reconstruct the

data. Like Call Reports data, this suggests that the data may include restated numbers for certain bank holding companies, especially for older data.

In the future, the data will be updated quarterly in conjunction with Bank structure data. Typically, FR Y-9C has a 40 to 45-day submission period from each calendar quarter-end. Thus, we adhere to this schedule and capture the initial reports to maintain consistency of the overall dataset going forward.

In addition, similar to the FFIEC Call Reports data, we check data from both the current and previous quarters during each quarterly update for late submission of previous quarter's filings or restated filings, starting from Q4 2023.

2.5.3 NIC Bank Structure

Structured data is sourced from a CSV file on the NIC Holding Company Data download page. WRDS fully refreshes the bank structure data every quarter when the Bank Holding Company Financials data is updated.

Please note that the attribute data for active banks and branches are updated with the most current information from the original source (NIC). Therefore, after each quarterly refresh, you will have access to the most recently updated bank names, types, and addresses. Similarly, the attribute data for closed banks only contains the most recent information available at the time of the bank's closure.

The relationship data includes all historical parent-subsidiary relationships, with start and end dates between a focal bank and its immediate parent company. Please note that the highest financial controlling company, which used to be available under RSSD9364, and the regulatory top holder with the highest ownership (RSSD9348), are no longer included in FFIEC Call reports or NIC Bank Structure data. This issue has been addressed in a related product, Bank Regulatory Premium by WRDS that has the 'WRDS Bank Ultimate Relationships' data. It provides yearly snapshots of bank hierarchies from focal banks to their ultimate parents. For more information about the Bank Regulatory Premium by WRDS, please refer to Section 5.

3 Tables

3.1 Common

Table Name: WRDS_BANK_REG_VARS (web query link)

This table presents metadata for variables contained in the WRDS_CALL and WRDS_BHCK tables, intended to assist users in navigating these resources. Due to the nature of the data, both Call reports and Bank Holding Company financials have thousands of variables with encoded names, which can complicate navigation. The WRDS_BANK_REG_VARS table provides variable names, descriptions, schedule names, types, and their respective locations within WRDS web queries and the WRDS cloud. This metadata enables users to pinpoint the datasets or web queries they need to access to download or retrieve the desired variables.

3.2 FFIEC Call Reports

Call reports data is divided into several tables based on variable mnemonic, due to web site restrictions regarding the number of variables in one table. The tables have names of 'WRDS_CALL_MNEMONIC':

Table name	Web query	Description	Mnemonic
			Description
WRDS_CALL_RCFD_1	Yes	Variables with RCFD	Foreign and
		mnemonic	Domestic Call
			(B/S) variables
WRDS_CALL_RCFD_2	Yes	Additional variables	Foreign and
		with RCFD mnemonic	Domestic Call
			(B/S) variables
WRDS_CALL_RCFA_1	Yes	Variables with RCFA	Foreign and
		mnemonic	Domestic Risk
			Asset variables
WRDS_CALL_RCFW_1	Yes	Variables with RCFW	Foreign and
		mnemonic	Domestic Risk
			Asset variables for
			advanced
			approach ²
			institutions

² For further details about Advanced Approach Institutions:

 $\frac{https://www.federalreserve.gov/supervisionreg/basel/advanced-approaches-capital-framework-implementation.htm}{}$

WRDS_CALL_RCON_1	Yes	Variables with RCON	Domestic Call
		mnemonic	(B/S) variables
WRDS_CALL_RCON_2	Yes	Variables with RCON	Domestic Call
		mnemonic	(B/S) variables
WRDS_CALL_RCOA_1	Yes	Variables with RCOA	Domestic Risk
		mnemonic	Assets variables
WRDS_CALL_RCOW_1	Yes	Variables with RCOW	Domestic Risk
		mnemonic	Assets variables
			with advanced
			approach
WRDS_CALL_RIAD_1	Yes	Variables with RIAD	Income Statement
		mnemonic	variables
WRDS_CALL_TE_1	Yes	Variables with TE	Text variables (e.g.
		mnemonic	– special memo)

The above tables can be merged again based on the primary keys described below:

Primary Key	Туре	Description
RSSD9001	Numeric	- A unique and permanent Bank ID, it is also named 'ID_RSSD' in other databases
RSSD9999	Date	 Filing period date variable that corresponds to each reporting quarter-end WRDS renames RCON9999 to RSSD9999 to keep consistency with the legacy data Sometimes, it comes with missing values in the original data
WRDS Report Date	Date	 Filing period date extracted from FFIEC original source file name, corresponding to the reporting quarter-end An alternative filing period date that can replace missing RSSD9999
RSSDFinInstFilingType	Text	- Filing type code, '031' for FFIEC 031, '041' for FFIEC 041, '051' for FFIEC 051

The detailed explanations about the mnemonics are available from MDRM website's Mnemonic page (link), and variable definitions are available from MDRM dictionary. (link)

3.3 NIC Bank Holding Company Financials (BHCK)

Like FFIEC Call data, due to web site restrictions regarding the number of variables in one table, the BHCK data is divided into several tables based on variable mnemonic. The tables have a prefix of 'WRDS_HOLDING_MNEMONIC'.

Table name	Web Query	Description	Mnemonic
			Description
WRDS_HOLDING_BHCK_1	Yes (<u>link</u>)	Variables with BHCK	Consolidated
		mnemonic	Financial
			Statements for
			Bank Holding
			Companies
WRDS_HOLDING_BHCK_2	Yes (<u>link</u>)	Additional variables	Consolidated
		with BHCK mnemonic	Financial
			Statements for
			Bank Holding
			Companies
WRDS_HOLDING_OTHER_1	Yes (<u>link</u>)	Variables with	All other
		mnemonics other than	mnemonics than
		ВНСК	BHCK – see MDRM
			website

The above tables can be merged again based on the common variables described below.

Primary Key	Туре	Description
RSSD9001	Numeric	- A unique and permanent Bank ID, it is also named 'ID_RSSD' in other databases
RSSD9999	date	 Filing period date variable that corresponds to each reporting quarter end WRDS renames RCON9999 to RSSD9999 to keep consistency with legacy data Sometimes, it comes with missing values in the original data
WRDSDownloadDate	Date	- Date when the data is downloaded from NIC

The detailed explanations about the mnemonics are available from MDRM website's Mnemonic page (link), and variable definitions are available from MDRM dictionary (link).

3.4 NIC Bank Structure Data

NIC's Bank Attributes and Structure data contains five tables. WRDS provides these with its original schema; therefore, users can locate five tables prefixed with 'WRDS_STRUCT_'. Detailed information about each variable is accessible in the NIC Bank Structure Data manual (link).

Table name	Web Query	Description
WRDS_STRUCT_ATTRIBUTES_ACTIVE	Yes (<u>link</u>)	 Attributes data such as status, address, etc. of active banks Header information is kept for names and addresses
WRDS_STRUCT_ATTRIBUTES_CLOSED	Yes (link)	 Attributes data such as status, address, etc. of closed banks Last information is kept for names and addresses
WRDS_STRUCT_ATTRIBUTES_BRANCHES	Yes (<u>link</u>)	- Attributes data such as status, address, etc. of bank branches, head office id is available
WRDS_STRUCT_RELATIONSHIPS	Yes (<u>link</u>)	- Immediate parent-subsidiary relationships with effective date range.
WRDS_STRUCT_TRNSFORMATIONS	Yes (<u>link</u>)	- Bank transformation records due to M&A, compliance failure, etc.

The primary keys in the Bank Attributes tables identify a unique record per ID RSSD (RSSD 9001) with an effective date range.

Primary Key	Туре	Description	Applicable tables
ID_RSSD	numeric	- A unique and permanent Bank ID, it is also named 'RSSD9001' in other databases	Active, Closed, Branches
ID_RSSD_HEAD_OFFICE	Numeric	- ID_RSSD of the head office of the branch	Branches

		 It can be linked with ID_RSSD in Active and Closed datasets 	
D_DT_START	Date	- The first date when the record is effective	Active, Closed, Branches
D_DT_END	Date	 The last date when the record is effective Missing if the record is effective currently 	Active, Closed, Branches

The primary keys in the Relationships table are shown below:

Primary Key	Туре	Description	Applicable tables
ID_RSSD_OFFSPRING	numeric	- A unique and permanent Bank ID of the subsidiary or the controlled entity	Relationships
ID_RSSD_PARENT	Numeric	- ID_RSSD of parent or the controlling entity	Relationships
D_DT_RELN_EST	Date	- Date when the relationship was established	Relationships
D_DT_START	Date	- The first date when the record is effective	Relationships
D_DT_END	Date	- The last date when the record is effective - Missing if the record is effective currently	Relationships

The primary keys in the Transformations table are shown below:

Primary Key Type	Description	Applicable tables
------------------	-------------	-------------------

ID_RSSD_PREDECESSOR	numeric	•	nd permanent the subsidiary or lled entity	Transformations
ID_RSSD_SUCCESSOR	Numeric	ID_RSSD o	f parent or the entity	Transformations
D_DT_TRANS	Date	Date of the	transformation	Transformations

3.5 NY Fed Bank to CRSP Linking table

• Table Name: WRDS_BANK_CRSP_LINK (web query link)

This table presents linkages between Bank ID (either ID RSSD or RSSD9001) and CRSP PERMCO, along with the applicable date ranges. It provides linkages from commercial banks and bank holding companies to CRSP companies, covering the period from June 1986 to September 2023, as updated in April 2024. For a detailed explanation of the methodology, please refer to the data manual (link).

Primary Key	Туре	Description
RSSD9001	numeric	- A unique and permanent
		Bank ID
PERMCO	numeric	- ID_RSSD of parent or the
		controlling entity
Dt_start	date	- Link start date
Dt_end	date	- Link end date

4 Comparison with the Legacy Bank Regulatory data

4.1 Comparison Summary

The following is a summary of the coverage information for both the legacy data and the new data, broken down by each data type. This allows users to quickly understand the

similarities and differences between the two. The comparison is based on regulatory filing forms, time coverage, and the availability of derived variables. In the table, a Data Source marked with an asterisk (*) indicates that the data is included in another banking data product, the Bank Regulatory Premium by WRDS, which requires a separate subscription. Please refer to Section 5 for more information about the Bank Regulatory Premium by WRDS.

In terms of bank universe, the new call data from FFIEC covers about 1.1% more banks from 2001 to 2005. It is likely due to late filings or backfilling of data around October 2005 when FFIEC's Central Data Repository system was officially adopted for call reports filings and the data dissemination.

Data Type	WRDS	Data	Coverage	Call Forms	Derived Variables
	Version	Source			
US Bank Call	Legacy	Chicago	Mar 1976 -	FFIEC 031,	Yes
Data		Fed	Dec 2010	032, 033,	
			(permanently	034, 041,	
			stopped)	051, and	
				other legacy	
				forms	
		FFIEC	Mar 2011 –	FFIEC 031,	Majority missing
			Jun 2021	041, 051	
	New	FFIEC	Mar 2001 -	FFIEC 031,	Majority missing
			Now	041, 051	
		WRDS	Mar 2001 -	FFIEC 031,	279 derived variables
		Call	Now	041, 051	(replicated and extended by
		Derived*			WRDS)
	•				
Foreign Bank	Legacy	Chicago	Dec 1978 –	FFIEC 002, FR	Yes
& Edge Corp		Fed	Jun 2021	2886b	
Call Data			(permanently		
			stopped)		
	New	WRDS	Mar 2021 –	FFIEC 002, FR	Yes
		Other	Mar 2023	2886b	
		(Foreign)			
		Call			
		(FOIA			
		request)*			
	•				
Bank Holding	Legacy	Chicago	Jun 1986 –	FR Y-9C, FR	Yes
Company		Fed	Jun 2021	Y-9LP, FR Y-	
Financials			(permanently	9SP	
			stopped)		
	1	I	I	L	

	1	T	T	T	
		NIC	Sep 2021 –	FR Y-9C, FR	Yes
			Dec 2021	Y-9LP, FR Y-	
			(WRDS	9SP	
			update		
			stopped)		
	New	NIC	Mar 2021 –	FR Y-9C, FR	Yes
			Sep 2023	Y-9LP, FR Y-	
				9SP	
Bank	Legacy	Chicago	Mar 2011 –	Bank	N/A
Attributes &		Fed	Jun 2021	Attributes &	
Structure Data				Structure	
				Data merged	
				provided with	
				Foreign Call	
				(002 & 2886b)	
	New	NIC	Beginning –	More detailed	N/A
			Dec 2023	Bank	
				Attributes &	
				historical	
				relationships	
				data	
Bank to CRSP	Legacy	N/A	N/A	N/A	N/A
Linking Table	New	NY Fed	Mar 1986 –	Bank ld to	N/A
			Sep 2023	CRSP Permco	
				linking table	
				maintained	
				by NY Fed	

4.2 Maintaining Consistency between Legacy and New Call Data

In order to make the legacy call data consistent with the new Bank Regulatory call data, the initial step is to substitute missing RCFD series with RCON series having the same item code. For example, RCFD2170 can be replaced with non-missing RCON2170. This approach is particularly relevant for domestic banks that file FFIEC 041 and 051, as they do not report RCFD series. The RCFD mnemonic, which represents financial data from both foreign and domestic branches, is not required to these filings. In a similar way, one can replace absent RCFA and RCFW series with RCOA and RCOW series, respectively.

Even after implementing this strategy, it's possible to encounter variables that are missing in the new call data. These are typically derived variables (MDRM 'D' type), which requires calculations using available reported variables (MDRM 'F' type). For these derived variables, the MDRM dictionary, FFIEC forms, and scholarly literature are the resources for determining the correct calculation method. Users also can consult the WRDS Call Derived dataset included in the related product Bank Regulatory Premium by WRDS. Refer to the following section for additional information about the Bank Regulatory Premium by WRDS.

5 Related Product: Bank Regulatory Premium by WRDS

Bank Regulatory Premium by WRDS, which is constructed using both the new and legacy Bank Regulatory data by WRDS, along with other data sources, includes exclusive datasets enriched and created by WRDS.

Bank Regulatory Premium by WRDS is designed to help research in the banking area by addressing the data inconsistency issues, providing various research analytics tools, and supplying additional data on financial entities.

Specifically, it provides additional call reports data that is only accessible through FOIA requests, pre-calculated timeseries of variables, and various linking facilities. Moreover, it also offers annual snapshots detailing the ultimate parent-subsidiary relationships of banks, linking tables bridging bank ID to Legal Entity Identifier (LEI), and LEI entity metadata & relationships data. Bank Regulatory Premium by WRDS requires a separate subscription. Refer to the following table for data offerings and contact WRDS Support for more information.

Data Product Name	Coverage	Description
WRDS Other (Foreign) Calls	Mar 2021 – Mar 2023	Data of FFIEC 002 and FR
		2886b, obtained through FOIA
		request
WRDS Call Derived	Mar 2001 - Now	279 selected call reports
		variables with 'D' type in
		MDRM dictionary which is no
		longer available in FFIEC Call
		data. The variables must be
		derived by using reported
		variables ('F' type) in the call
		reports (FFIEC 031, 041, and
		051)

WRDS Call Research	Mar 1976 – Mar 2023	365 Pre-calculated variables
		for research (B/S vars, I/S vars,
		risk asset vars such as total
		assets, deposits, risk capital
		ratios, etc.) Calculation
		formulas are based on
		academic studies in the
		banking area
WRDS Ultimate Parents	Beginning – Dec 2023	Pre-identified bank trees and
		ultimate parents (yearly
		snapshots)
LEI Attributes	2012 – 2023	Historical snapshots of Entity
		attributes (names, addresses,
		legal events, etc.) of global
		entities with LEI identifiers,
		CRSP's DSENAMES style data
LEI Relationships	2012 – 2023	Historical snapshots of parent-
		subsidiary relationships of
		global entities with LEI
WRDS LEI to Bank Linking	2012 - Dec 2023	Bank Id to LEI linking table,
		reinforced by WRDS name and
		address matching algorithm
		(30% from Fed, 70% matched
		by WRDS)
LEI to BIC Linking	Jan 2018 – Dec 2023	LEI to BIC code linking table
		from GLEIF
LEI to ISIN Linking	Apr 2019 – Dec 2023	LEI to ISIN linking table (GLEIF
		and ISIN are the source)

6 Citation Guidelines

For the data listed below, please make a reference to the **Bank Regulatory by WRDS**:

- GLEIF LEI attributes & relationships data
- FFIEC Call data
- NIC Bank Holding Company Financials and Bank Structure data

For WRDS Bank CRSP linking table, we suggest making a reference to **Federal Bank of New York. CRSP-FRB Link**.

Reference

CRSP-FRB linking, https://www.newyorkfed.org/research/banking_research/crsp-frb, Federal Bank of New York, 2023-Q3, latest access date: 3/19/2024

FFIEC Reporting Forms, https://www.ffiec.gov/ffiec_report_forms.htm, FFIEC, latest access date: 4/30/2024

MDRM Dictionary CSV file, https://www.federalreserve.gov/apps/mdrm/, latest download date: 1/1/2024

Edge Act and Agreement Corporations in International Banking and Finance, https://www.newyorkfed.org/medialibrary/media/research/monthly_review/1964_pdf/05_3_64.pdf, Federal Reserve Bank of New York, latest access date 4/30/2024

Appendix A1. Changes in Form-Filing Requirements

Notable historical changes in reporting regulations are summarized in the tables below for each call report forms.

1. FFIEC 031 – Quarterly Call Report

Start date	Criteria for Reporting Eligibility
March 31, 2020	i. Banks with branches and consolidated subsidiaries in US territories and possessions, Edge or Agreement subsidiaries, foreign branches, consolidated foreign subsidiaries, or International Banking Facilities,
	ii. Banks with domestic offices only and total consolidated assets of \$100 billion or more
	iii. Banks that are advanced approaches institutions for regulatory capital purposes
June 30, 2018	i. Banks with branches and consolidated subsidiaries in US territories and possessions, Edge or Agreement subsidiaries, foreign branches, consolidated foreign subsidiaries, or International Banking Facilities,
	ii. Banks with domestic offices only and total consolidated assets of \$100 billion or more
March 31, 1999	i. Banks with branches and consolidated subsidiaries in US territories and possessions, Edge or Agreement subsidiaries, foreign branches, consolidated foreign subsidiaries, or International Banking Facilities

2. FFIEC 041 – Quarterly Call Report

Start date	Criteria for Reporting Eligibility	
September 30, 2019	i. Banks with domestic offices only and	
	total consolidated assets of less than	
	\$100 billion	

	iv.	If total assets less than \$5 Billion, may choose Form 051
June 30, 2018	i. ii.	Banks with domestic offices only and total consolidated assets of less than \$100 billion If total assets less than \$1 Billion, may choose Form 051
March 31, 2017	i. ii.	Banks with domestic offices only If total assets less than \$1 Billion, may choose Form 051
March 31, 2001	ii.	Banks with domestic offices only

3. FFIEC 051 – Quarterly Call Report

Start Date	Criteria for Reporting Eligibility
Sep 30, 2019	Banks with domestic offices only and total consolidated assets of less than \$5 billion
March 31, 2017	Banks with domestic offices only and total consolidated assets less than \$1 billion

4. Other forms

- a. FFIEC 032: domestic banks with assets= >\$300 million (before 2001), retired in 2001 with adoption of FFIEC 041
- b. FFIEC 033: domestic banks with assets =>\$100 million (before 2001), retired in 2001 with adoption of FFIEC 041
- c. FFIEC 034: domestic banks with assets <\$100 million (before 2001), retired in 2001 with adoption of FFIEC 041
- d. FFIEC 002: Every U.S. branch and agency of a foreign bank as defined in IBA, foreign countries also include Puerto Rico, and other US territories.
- e. FR 2886b: Edge and agreement corporations
- 5. Y-9C Quarterly Consolidated financial statements for Holding Companies (BHCs³, SLHCs⁴, IHCs⁵, SHCs⁶)

Start date	Criteria for Reporting Eligibility

³ Bank Holding Companies

⁴ Savings and Loan Holding Companies

⁵ U.S. Intermediate Holding Companies

⁶ Securities Holding Companies

September 30, 2018	Unless otherwise noted, top tier ⁷ Holding
	Companies with consolidated assets >= \$ 3 bil,
March 31, 2015	Unless otherwise noted, top tier Holding
	Companies with consolidated assets >= \$1 bil
March 31, 2006	Unless otherwise noted, top tier Holding
	Companies with consolidated assets >= \$500 mil
Before 2006	Unless otherwise noted, top tier Holding
	Companies with consolidated assets >= \$150 mil

6. Y-9SP – <u>Semiannual Parent company only financial statements for small Holding</u> Companies

Start date	Criteria for Reporting Eligibility
September 30, 2018	Unless otherwise noted, Holding Companies with
	consolidated assets < \$ 3 bil
March 31, 2015	Unless otherwise noted, Holding Companies with
	consolidated assets < \$1 bil
March 31, 2006	Unless otherwise noted, Holding Companies with
	consolidated assets < \$500 mil
Before 2006	Unless otherwise noted, Holding Companies with
	consolidated assets < \$150 mil

7. Y-9LP – <u>Quarterly Parent company only</u> financial statements for large Holding Companies

Start date	Criteria for Reporting Eligibility
September 30, 2018	Unless otherwise noted, Holding Companies with
	consolidated assets >= \$ 3 bil
March 31, 2015	Unless otherwise noted, Holding Companies with
	consolidated assets >= \$1 bil
March 31, 2006	Unless otherwise noted, Holding Companies with
	consolidated assets >= \$500 mil
Before 2006	Unless otherwise noted, Holding Companies with
	consolidated assets >= \$150 mil

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⁷ Tier is determined based on the position within its corporate hierarchy.

Appendix A2. Filing type code lookup table

Filing Name	RCON9804	RSSDFinInstFilingType
No report	0	
Mutual Savings Bank (discontinued 12/31/88)	1	
Short Form Reporter	2	
Long Form Reporter	3	
Long Form Reporter with LBS (discontinued 12/31/83)	4	
Domestic & Foreign Reporter (discontinued 12/31/83)	5	
Domestic & Foreign Reporter with LBS (assets less than \$300m - national banks only) (discontinued 12/31/83)	6	
Domestic & Foreign Reporter with LBS (assets greater than \$300m) (discontinued 12/31/83)	7	
Large Bank Supplement only (discontinued 12/31/83)	8	
Domestic & Foreign Report only (without LBS) (discontinued 12/31/83)	9	
Abbreviated Income Report (discontinued 12/31/83)	10	
Consolidated Report of Income (discontinued 12/31/83)	11	
Domestic Report of Condition (discontinued 12/31/83)	12	
Consolidated Report of Income (discontinued 12/31/82)	13	
Consolidated Report of Condition for a Bank and Its Domestic and Foreign Subsidiaries (discontinued 12/31/83)	14	
International Banking Act Call Reporter (RCON only) (FFIEC 002)	20	
Edge Act and Agreement Corporations (FR 2886b)	30	
New York Investment Companies (FR 2886a)	40	
FFIEC 041 Reporter (effective 3/31/01)	41	041
FFIEC 030 Reporter	50	
FFIEC 031 Reporter	51	031
FFIEC 032 Reporter (effective 3/31/84, discontinued after 12/31/00)	52	
FFIEC 033 Reporter (effective 3/31/84, discontinued after 12/31/00)	53	
FFIEC 034 Reporter (effective 3/31/84, discontinued after 12/31/00)	54	

FFIEC 016 Report (effective 3/31/86 only) for the FFIEC	56	
034 Reporter		
FFIEC 017 Report (effective 3/31/86 only) for the FFIEC	57	
031-33 Reporters		
FFIEC 018 Report (effective 3/31/86 only) for Insured	58	
Saving Banks		
FFIEC 051 Report (effective 3/31/17)	59	051
FR Y-9C	90	
Report not filed	99	

Appendix B. Dataset-Specific Manuals

WRDS Website Links to the dataset-specific manuals of Bank Regulatory and other related WRDS products

Manual	Data	Link	Subscription
MDRM by Federal Reserve	Bank Regulatory Call Reports	Click	Complimentary with WRDS
	and BHCK		platform
NIC Bank Structure	Bank Regulatory Bank	Click	Complimentary with WRDS
	Structure		platform
NY Fed CRSP Linking	Bank Regulatory CRSP	Click	Complimentary with WRDS
Methodology	Linking table		platform
Bank Regulatory Premium by	All Bank Regulatory Premium	Click	A separate subscription
WRDS Definitions	by WRDS data		required
WRDS Bank Struct Ultimate	WRDS Bank Structure	Click	A separate subscription
Parents Methodology	Ultimate Parents		required