

Commercial real estate exposure at US banks

Banks

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- Further deterioration in the commercial real estate (CRE) sector has garnered significant recent attention given rapidly rising market interest rates, low demand, slow/low return to office and few transactions limiting price discovery.
- Although CRE may pose some manageable earnings risk over the 2024 - 2026 period in our view, we do not expect any meaningful bank capital deterioration, systemic crisis or the risks of contagion/spread to other sectors of commercial lending.

Main mitigating factors

1. The main area of risk in urban and suburban office properties and US bank office exposure appears manageable, representing ~2% of average total loans at large banks and ~4% small and mid-sized banks. Most banks have recently increased their allowance for credit losses (reserves) for office properties to around 8-10% of loans outstanding.
2. CRE has been a key area of focus for bank managements and regulators for the past couple years. In early 2023, banks started disclosing additional detail on CRE Office exposure in quarterly earnings presentations and/or the 10Q's. Most banks disclose the size of CRE Office exposure, but detailed stats to assess risk vary dramatically.
3. Bank regulators (including the Federal Reserve Bank) have been focused on bank's CRE exposure in recent years — especially office exposure given concentration and asset quality deterioration. The annual large bank stress tests (Dodd-Frank Act Stress Test and Comprehensive Capital Adequacy and Review) include significant write downs of 40% on CRE exposure in the severely adverse scenario.
4. US banks have been tightening underwriting standards related to CRE for more than a year. The quarterly Senior Loan Officer Opinion Survey (SLOOS) has been showing incremental tightening of lending standards since mid-2022.
5. CRE has a long-dated cycle and losses would likely spread out over several years. Bank regulators are encouraging US banks to pursue workouts of relationship-based CRE loans in order to minimize any macro-economic impact of a sudden write-down in real estate values.

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Market features

Total commercial real estate debt including loans to multifamily housing properties total ~USD 5.7 trillion including USD 2.1 trillion in multi-family loans outstanding and USD 3.6 trillion in other CRE debt outstanding.

Banks represent about half of the total CRE exposure, including multifamily (Fig 1).

Fig. 1 - Total CRE debt outstanding

As of year-end 2023

Multifamily (\$BN)			
Commercial Banks	\$682	Commercial Banks	32.2%
CMBS	\$65	CMBS	3.1%
Insurance Companies	\$219	Insurance Companies	10.3%
GSEs/Agency	\$971	GSEs/Agency	45.8%
Other	\$181	Other	8.5%
Total	\$2,118		
Commercial (\$BN)			
Commercial Banks	\$2,208	Commercial Banks	61.0%
CMBS	\$418	CMBS	11.5%
Insurance Companies	\$505	Insurance Companies	14.0%
GSEs/Agency	\$0	GSEs/Agency	0.0%
Other	\$489	Other	13.5%
Total	\$3,620		
Total (\$BN)			
Commercial Banks	\$2,890	Commercial Banks	50.4%
CMBS	\$483	CMBS	8.4%
Insurance Companies	\$724	Insurance Companies	12.6%
GSEs/Agency	\$971	GSEs/Agency	16.9%
Other	\$670	Other	11.7%
Total	\$5,738		100.0%

Source: Federal Reserve, SNL Financial, NAREIT, UBS

We believe it is important to segment bank exposure to CRE loans by asset size as, large, better capitalized banks are better able to withstand any potential losses arising from CRE debt. As can be seen in Fig. 2:

- Large banks (USD 250 billion+ in assets) have ~11 % of total CRE loan exposure.
- Banks with assets between USD 100BN-USD 250BN have ~4% of total CRE loan exposure.
- Mid-sized banks (USD 20 billion to USD 100 billion in assets) have 7.5% of total CRE loan exposure; and,
- Small banks (USD < 20 billion in assets) have 21.6% of total CRE exposure.

Fig. 2 - Bank exposure to CRE loans segmented by asset size

Data as of 3Q 2023

Bank Asset Base	As of 3Q 2023		
	Total CRE Loans Outstanding \$MM	% of Total Bank CRE Loans Outstanding	% of Total CRE Loans Outstanding
> \$250BN in Assets	\$635,920	22.0%	11.2%
\$100BN-\$250BN in Assets	\$208,139	7.2%	3.7%
\$20BN-\$100BN in Assets	\$424,782	14.7%	7.5%
< \$20BN in Assets	\$1,621,159	56.1%	28.4%

Source: SNL Financial, UBS

Source: SNL Financial, UBS

Notably, the vast majority of CRE debt held by banks is held by those with less than USD 20 billion in assets. Accordingly, we believe the greatest risk lies with these smaller “community” banks and therefore CRE is not a risk to the overall banking system. The very large banks have only about 11% exposure to CRE but little in the way of either office or construction & development. A break down of the CRE loan exposure for the top 95 banks (by assets) can be found in Fig. 5 below.

Fed’s annual stress tests

The Federal Reserve Bank has been focused on CRE office given higher interest rates, slower than expected return to office and supply/demand challenges which could negatively impact property values and lead to losses.

In its annual assessment of large banks’ capital adequacy, the Fed applies a severely adverse scenario characterized by a global recession which includes a 40% impairment of commercial real estate values and a 20% decline in commercial office, specifically. The Fed further assumed that office properties were the CRE most at risk of a sustained drop in cash flows and asset values. Despite these challenge, every bank in 2023 passed the Comprehensive Capital Analysis and Review and can continue to conduct operations and pay dividends even under severely adverse conditions.

Office delinquencies are rising

Overall commercial loan delinquency rates at US banks remain below what we would consider a “normalized” rate; however, CRE delinquencies have been rising in recent quarters. In fact, the CRE office loan segment has shown the largest recent increase in delinquencies and banks have been increasing provisions for credit losses — with some reporting allowance for credit losses of 8-10% of office exposure. Notably, in their periodic examinations, bank regulators are closely monitoring underwriting and loan quality and have recently added a horizontal review focusing on potential deterioration in CRE.

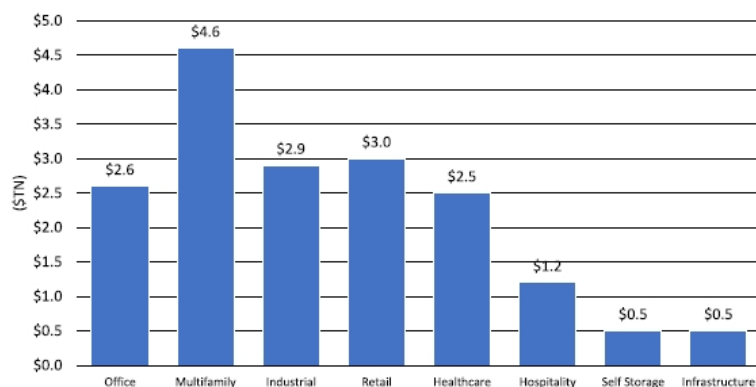
Commercial real estate is more than office

There appears to be a misunderstanding among the mainstream press and many non CRE participants that CRE is a lot more than office. We estimate that the total gross value of US CRE is approximately USD 17.8 trillion, with office representing some 14.6% or USD 2.6 trillion (Fig. 3). Although

this is a significant figure we believe it is important to recognize there are many other asset classes within CRE that have significantly better operating fundamentals.

Fig. 3 - Estimated gross values of US CRE by asset class

As of January 2024 (USD in trillions)



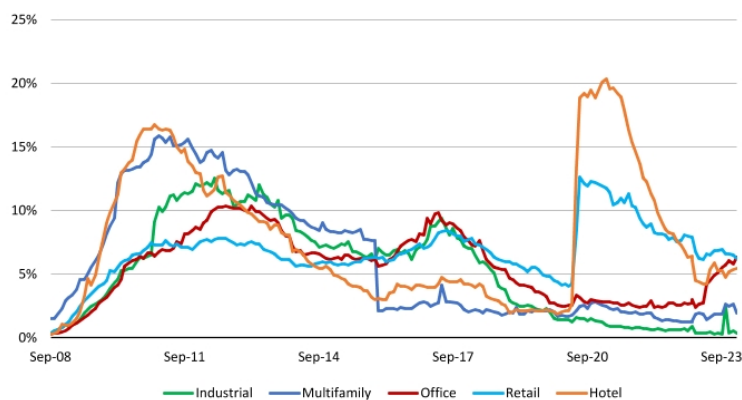
Source: CoStar, NAREIT, JLL, CBRE, Revista, NICMAP, UBS Estimates

What other lending sources might be impacted by the challenges in the office market?

We estimate that office loans represent approximately 27% of the USD 620bn commercial mortgage-backed securities (CMBS) market. As can be seen in Fig. 4, CMBS delinquency rate for office loans have increased substantially recently although they currently remain below prior highs of 10%. In addition, office loans make up 12.9% of the collateralized loan obligation market where the delinquency rate as of December 2023 was 10.6%.

Fig. 4 - CMBS delinquency rates by property type

January 2008 - January 2024



Source: Trepp, UBS

Banks

Fig. 5 - CRE loan exposure for the top 95 US banks segmented by asset size

Data as of 3Q 2023

		% of Total Loans/Leases											Delinquent CRE Loans							CRE Loan Delinquency Severity			
Ticker	Bank	Total Assets \$MM	SMM		Occupied Nonfarm/Nonres	Multifamily	Const. & Land Development	Unsecured CRE	Total	As a % of CRE Loans		As a % of Total Loans	CRE Loan Delinquency Severity										
			Total Loans	Total Leases						SMM	CRE Loans		<90 Days	>= 90 Days	Nonaccrual	Total							
JPM	JPMorgan Chase & Co.	\$3,898,333	\$1,353,689	\$171,179	2.7%	7.5%	1.1%	1.4%	12.6%	\$1,771	1.0%	0.1%	0.33%	0.01%	0.70%	1.03%							
BAC	Bank of America Corp	\$3,153,090	\$1,092,804	\$75,681	3.1%	0.6%	1.1%	2.2%	6.9%	\$1,649	2.2%	0.2%	0.37%	0.02%	1.79%	2.18%							
C	Citigroup Inc.	\$2,368,477	\$945,292	\$37,347	1.5%	1.3%	0.9%	1.8%	5.5%	\$852	2.3%	0.1%	0.26%	0.26%	1.76%	2.28%							
WFC	Wells Fargo & Company	\$1,909,261	\$684,230	\$144,991	7.5%	2.8%	2.4%	2.6%	15.3%	\$3,728	2.6%	0.4%	0.24%	0.01%	2.32%	2.57%							
USB	U.S. Bancorp	\$668,039	\$377,570	\$56,234	4.9%	3.2%	2.9%	3.9%	14.9%	\$616	1.1%	0.2%	0.06%	0.00%	1.03%	1.10%							
PNC	PNC Financial Services Group, Inc.	\$557,356	\$319,361	\$49,445	5.6%	3.8%	1.9%	4.2%	15.5%	\$746	1.5%	0.2%	0.01%	0.00%	1.49%	1.51%							
TCF	Truist Financial Corporation	\$542,707	\$317,112	\$42,091	5.9%	1.6%	2.7%	3.0%	13.3%	\$392	0.9%	0.1%	0.07%	0.00%	0.86%	0.93%							
COF	Capital One Financial Corp	\$471,435	\$315,522	\$49,241	4.7%	3.2%	0.9%	6.8%	15.6%	\$805	1.6%	0.3%	0.28%	0.03%	1.33%	1.63%							
BNK	Bank of New York Mellon Corp	\$405,248	\$65,807	\$6,594	4.5%	2.2%	1.8%	1.5%	10.0%	\$40	0.2%	0.0%	0.15%	0.00%	0.00%	0.15%							
STT	State Street Corporation	\$284,415	\$35,436	\$3,117	5.6%	3.2%	0.0%	0.0%	8.8%	\$17	1.5%	0.1%	0.00%	0.00%	1.51%	1.51%							
Total - Banks w/Assets >\$250BN		\$14,258,360	\$5,506,823	\$635,920					11.5%														
CFG	Citizens Financial Group, Inc.	\$225,635	\$132,442	\$30,545	8.5%	5.1%	4.9%	1.7%	20.2%	\$601	2.0%	0.4%	0.38%	0.01%	1.58%	1.97%							
FCNC.A	First Citizens BancShares, Inc.	\$213,766	\$133,256	\$19,860	8.3%	2.4%	3.3%	0.9%	14.9%	\$540	2.7%	0.4%	0.42%	0.39%	1.91%	2.72%							
FITB	Fifth Third Bancorp	\$212,967	\$120,702	\$12,124	3.0%	0.9%	4.8%	1.4%	10.0%	\$19	0.2%	0.0%	0.06%	0.00%	0.10%	0.16%							
MTB	M&T Bank Corporation	\$209,124	\$99,379	\$39,819	14.5%	4.7%	5.9%	5.0%	30.1%	\$1,926	4.8%	1.5%	1.63%	0.17%	3.04%	4.84%							
KEY	KeyCorp	\$187,995	\$121,455	\$19,406	5.0%	5.7%	2.6%	3.3%	16.6%	\$69	0.4%	0.1%	0.04%	0.02%	0.30%	0.35%							
HBAN	Huntington Bancshares Incorporated	\$186,650	\$43,577	\$14,456	6.9%	2.6%	1.9%	0.5%	11.9%	\$149	1.0%	0.1%	0.18%	0.00%	0.85%	1.03%							
RF	Regions Financial Corporation	\$154,218	\$150,865	\$17,413	4.4%	2.1%	3.5%	7.5%	17.5%	\$307	1.8%	0.3%	0.68%	0.00%	1.09%	1.76%							
NTRS	Northern Trust Corporation	\$146,331	\$116,633	\$5,530	6.6%	3.7%	1.6%	0.8%	12.7%	\$3	0.1%	0.0%	0.00%	0.00%	0.06%	0.06%							
NYCB	New York Community Bancorp Inc	\$111,230	\$85,921	\$48,984	8.8%	43.9%	3.6%	0.8%	57.0%	\$332	0.7%	0.4%	0.17%	0.00%	0.51%	0.68%							
Total - Banks w/Assets \$100BN-\$250BN		\$1,647,916	\$1,004,230	\$208,139					20.7%														
		% of Total Loans/Leases											Delinquent CRE Loans							CRE Loan Delinquency Severity			
Ticker	Bank	Total Assets \$MM	SMM		Occupied Nonfarm/Nonres	Multifamily	Const. & Land Development	Unsecured CRE	Total	As a % of CRE Loans		As a % of Total Loans	CRE Loan Delinquency Severity										
			Total Loans	Total Leases						SMM	CRE Loans		<90 Days	>= 90 Days	Nonaccrual	Total							
ZION	Zions Bancorporation, N.A.	\$87,269	\$50,912	\$14,900	13.8%	4.7%	7.7%	0.0%	26.2%	\$83	0.6%	0.1%	0.13%	0.01%	0.42%	0.56%							
CMA	Comerica Incorporated	\$85,909	\$50,134	\$12,317	7.7%	4.4%	8.8%	2.2%	23.1%	\$114	0.9%	0.2%	0.78%	0.12%	0.02%	0.92%							
FHN	First Horizon Corporation	\$82,536	\$62,400	\$14,841	13.9%	3.1%	6.3%	0.5%	23.8%	\$115	0.8%	0.2%	0.75%	0.02%	0.77%	0.94%							
WBS	Webster Financial Corporation	\$73,131	\$18,399	\$19,309	18.6%	14.7%	3.5%	1.8%	38.5%	\$27	0.1%	0.1%	0.01%	0.00%	0.13%	0.14%							
WAL	Western Alliance Bancorp	\$70,891	\$53,635	\$15,265	17.7%	1.2%	9.1%	1.8%	29.7%	\$179	1.2%	0.3%	0.67%	0.00%	0.51%	1.17%							
BPOP	Popular, Inc.	\$69,737	\$17,134	\$8,272	14.7%	6.9%	2.8%	0.0%	24.4%	\$32	0.4%	0.1%	0.11%	0.00%	0.28%	0.39%							
EWBC	East West Bancorp, Inc.	\$68,289	\$56,933	\$18,278	23.3%	8.7%	1.5%	2.3%	35.9%	\$18	0.1%	0.0%	0.03%	0.00%	0.07%	0.10%							
VLV	Valley National Bancorp	\$61,183	\$23,751	\$27,507	29.4%	17.7%	7.7%	0.1%	54.9%	\$149	0.5%	0.3%	0.03%	0.01%	0.50%	0.54%							
SNV	Synovus Financial Corp.	\$59,344	\$32,044	\$14,316	19.7%	6.0%	6.6%	0.4%	32.7%	\$91	0.6%	0.2%	0.03%	0.00%	0.60%	0.63%							
WUTC	Wintrust Financial Corporation	\$55,550	\$51,332	\$9,250	10.7%	5.2%	4.8%	1.4%	22.1%	\$66	0.7%	0.2%	0.57%	0.00%	0.14%	0.71%							
COLB	Columbia Banking System, Inc.	\$51,994	\$21,433	\$14,889	16.6%	15.7%	7.1%	0.5%	40.0%	\$12	0.1%	0.0%	0.03%	0.01%	0.04%	0.08%							
ONB	Old National Bancorp	\$49,059	\$32,083	\$11,295	15.3%	9.9%	8.4%	1.0%	34.5%	\$86	0.8%	0.3%	0.01%	0.00%	0.75%	0.76%							
BOKF	BOK Financial Corporation	\$48,969	\$41,777	\$7,294	12.7%	6.7%	11.3%	0.1%	30.7%	\$7	0.1%	0.0%	0.00%	0.00%	0.10%	0.10%							
CFR	Cullen/Frost Bankers, Inc.	\$48,790	\$33,892	\$6,315	21.5%	1.5%	11.4%	0.0%	34.3%	\$36	0.6%	0.2%	0.24%	0.01%	0.32%	0.57%							
CADE	Cadence Bank	\$48,523	\$50,131	\$9,542	14.6%	2.9%	11.7%	0.0%	29.2%	\$25	0.3%	0.1%	0.07%	0.00%	0.19%	0.26%							
PNNP	Pinnacle Financial Partners, Inc.	\$47,524	\$14,272	\$11,815	18.6%	4.7%	12.3%	1.3%	36.8%	\$4	0.0%	0.0%	0.01%	0.00%	0.02%	0.03%							
FNB	F.N.B. Corporation	\$45,747	\$32,700	\$8,660	17.5%	1.5%	7.8%	0.0%	26.8%	\$24	0.3%	0.1%	0.09%	0.00%	0.19%	0.28%							
SSB	SouthState Corporation	\$44,989	\$25,332	\$11,479	24.1%	3.1%	8.6%	0.0%	35.8%	\$28	0.2%	0.1%	0.07%	0.00%	0.17%	0.24%							
ASB	Associated Banc-Corp	\$41,637	\$43,746	\$8,745	11.2%	6.1%	7.0%	4.6%	28.9%	\$21	0.2%	0.1%	0.12%	0.00%	0.13%	0.24%							
UMBF	UMB Financial Corporation	\$41,465	\$37,231	\$6,736	14.7%	1.3%	10.7%	2.7%	29.4%	\$20	0.0%	0.0%	0.00%	0.00%	0.00%	0.01%							
PB	Prosperity Bancshares, Inc.(R)	\$39,311	\$32,263	\$6,960	14.4%	2.4%	14.9%	0.8%	32.5%	\$23	0.3%	0.1%	0.19%	0.00%	0.13%	0.33%							
HWC	Hancock Whitney Corporation	\$36,308	\$32,683	\$5,661	13.6%	3.2%	6.6%	0.2%	23.6%	\$21	0.4%	0.1%	0.02%	0.34%	0.02%	0.38%							
BUK	BankUnited, Inc.	\$35,394	\$7,007	\$5,846	18.3%	3.1%	1.7%	0.9%	24.0%	\$17	0.3%	0.1%	0.00%	0.00%	0.29%	0.29%							
QZK	Bank QZK	\$32,767	\$21,157	\$17,386	18.1%	8.1%	42.4%	0.0%	68.6%	\$26	0.1%	0.1%	0.00%	0.00%	0.15%	0.15%							
COMM	Commerce Bancshares, Inc.	\$31,417	\$24,000	\$3,927	11.7%	1.6%	9.0%	0.5%	22.9%	\$0	0.0%	0.0%	0.00%	0.00%	0.00%	0.01%							
FIBK	First Interstate BancSystem, Inc.	\$30,541	\$16,164	\$7,446	22.7%	7.4%	10.6%	0.0%	40.8%	\$58	0.8%	0.3%	0.20%	0.01%	0.57%	0.78%							
TCBI	Texas Capital Bancshares, Inc.	\$29,628	\$18,240	\$5,341	8.0%	3.4%	9.4%	4.9%	25.7%	\$0	0.0%	0.0%	0.00%	0.00%	0.00%	0.00%							
UBSI	United Bankshares, Inc.	\$29,225	\$22,885	\$9,779	24.7%	6.6%	14.7%	0.2%	46.2%	\$26	0.3%	0.1%	0.13%	0.06%	0.08%	0.27%							
GBCI	Glacier Bancorp, Inc.	\$28,064	\$20,768	\$6,795	23.3%	4.4%	13.8%	0.5%	42.0%	\$33	0.5%	0.2%	0.04%	0.02%	0.42%	0.48%							
SFNC	Simmons First National Corporation Class A	\$27,568	\$7,476	\$8,083	26.7%	3.5%	18.0%	0.0%	48.2%	\$10	0.1%	0.1%	0.01%	0.00%	0.12%	0.12%							
FULT	Fulton Financial Corporation	\$27,309	\$11,647	\$5,454	14.6%	5.4%	5.1%	0.6%	25.7%	\$34	0.6%	0.2%	0.11%	0.01%	0.51%	0.63%							
UCBI	United Community Banks, Inc.	\$26,875	\$7,897	\$6,055	18.8%	1.5%	12.3%	0.5%	33.2%	\$35	0.6%	0.2%	0.04%	0.00%	0.55%	0.59%							
ABCB	Ameris Bancorp	\$25,698	\$20,583	\$8,013	23.7%	14.3%	18.4%	0.0%	48.6%	\$85	1.0%	0.5%	0.07%	0.19%	0.76%	1.02%							
FHB	First Hawaiian, Inc.	\$24,913	\$18,272	\$4,259	16.9%	6.3%	6.2%	0.3%	29.7%	\$0	0.0%	0.0%	0.00%	0.00%	0.00%	0.00%							
BOH	Bank of Hawaii, Inc.	\$23,550	\$19,083	\$3,448	15.6%	6.1%	3.0%	0.1%	24.8%	\$3	0.1%	0.0%	0.00%	0.00%	0.09%	0.09%							
CATY	Capital General Bancorp	\$22,845	\$17,134	\$7,346	23.2%	19.2%	7.4%	0.0%	38.5%	\$47	0.2%	0.0%	0.02%	0.61%	0.04%	0.64%							
WAFF	WaFd, Inc.	\$22,475	\$30,248	\$8,097	15.3%	16.4%	13.9%	0.9%	45.9%	\$33	0.4%	0.2%	0.05%	0.00%	0.35%	0.40%							
WAFF	WaFd, Inc.	\$22,475	\$30,248	\$8,097	15.5%	16.4%	13.9%	0.0%	45.9%	\$33	0.4%	0.2%	0.05%	0.00%	0.35%	0.40%							
HOMB	Home BancShares, Inc.	\$21,951	\$8,878	\$8,987	29.4%	3.1%	15.1%	15.3%	63.0%	\$46	0.5%	0.3%	0.07%	0.01%	0.43%	0.51%							
ERC	Eastern Bancorp	\$21,148	\$9,451	\$4,864	18.4%	12.0%	2.5%	2.1%	34.9%	\$31	0.6%	0.2%	0.04%	0.00%	0.60%	0.63%							
AU	Axos Financial, Inc.	\$20,825	\$12,715	\$8,326	15.9%	14.3%	18.4%	0.0%	48.6%	\$85	1.0%	0.5%	0.07%	0.19%	0.76%	1.02%							
AUX	Atlantic Union Bankshares Corporation	\$20,738	\$14,228	\$6,344	27.1%	6.2%	7.4%	0.8%	41.5%	\$10	0.2%	0.1%	0.09%	0.05%	0.10%	0.24%							
PTPI	Pacific Premier Bancorp	\$20,276	\$14,332	\$8,367	20.3%	39.0%	3.4%	0.4%	63.0%	\$5	0.1%	0.0%	0.02%	0.00%	0.03%	0.05%							
HLFI	Heartland Financial USA, Inc.	\$20,130	\$15,290	\$3,685	20.1%	2.3%	8.7%	0.0%	31.0%	\$14	0.4%	0.1%	0.13%	0.00%	0.26%	0.39%							
WSFS	WSFS Financial Corporation	\$20,041	\$16,784	\$5,130	24.6%	7.1%	8.4%	0.2%	40.3%	\$59	1.2%	0.5%	0.50%	0.04%	0.62%	1.16%							
Total - Banks w/Assets \$20BN-\$100BN		\$1,844,006	\$1,198,707	\$424,782					35.4%														
		% of Total Loans/Leases											Delinquent CRE Loans							CRE Loan Delinquency Severity			
Ticker	Bank	Total Assets \$MM	SMM		Occupied Nonfarm/Nonres	Multifamily	Const. & Land Development	Unsecured CRE	Total	As a % of CRE Loans		As a % of Total Loans	CRE Loan Delinquency Severity										
			Total Loans	Total Leases						SMM	CRE Loans		<90 Days	>= 90 Days	Nonaccrual	Total							
INDB	Independent Bank Corp.	\$19,371	\$13,924	\$6,951	30.3%	11.0%	7.3%	0.3%	48.9%	\$31	0.4%	0.2%	0.11%	0.00%	0.34%	0.44%							
FBP	First Bancorp	\$18,595	\$13,273	\$2,372	17.0%	1.1%	1.7%	0.0%	19.8%	\$21	0.9%	0.2%	0.17%	0.04%	0.65%	0.86%							
IBTX	Independent Bank Group, Inc.	\$18,520	\$21,197	\$7,993	37.8%	6.6%	11.6%	0.1%	56.1%	\$15	0.2%	0.1%	0.02%	0.02%	0.16%	0.19%							
TRMK	Trustmark Corporation	\$18,391	\$5,579	\$5,011	17.3%	8.8%	12.4%	0.1%	38.6%	\$23	0.4%	0.2%	0.01%	0.00%	0.43%	0.45%							

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