

October 27, 2009

The Outlook for Commercial Real Estate and Its Impact on Banks

Distressed Assets and the Commercial Mortgage Crisis



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Overview

- The economy is showing clear signs of stabilizing
- Many credit markets are normalizing
- On-going TALF and PPIP-driven rallies in structured finance markets
- All of these factors have recently led to improved sentiment surrounding CRE
- But very significant problems remain:
 - Job growth not expected to pick up until 2011 and then may be anemic for several years
 - Demand for space typically reacts with 18-24 month lag to job creation
 - Savings rate expected to remain far above recent historical levels, depressing consumer spending and keeping severe pressure on retail
 - Global exports remain weak, despite improvements in some large developing countries like China and Brazil, keeping stress on industrial properties
 - Multifamily and hotel loans exhibiting alarming paces of deterioration

Overview

- Our view that CRE faces enormous challenges over the coming years remains intact
 - CRE fundamentals (rents and vacancy rates) will continue to deteriorate, in some cases for several years, and values will continue to decline
 - CMBS delinquency rates will continue to climb over the next 12-24 months, reaching historically high levels
 - A “refinancing crisis” will lead initially to mass extensions and ultimately to mass modifications and liquidations and huge losses for CMBS trusts
 - In banks, CRE exposures will lead to hundreds of billions of dollars in real losses and many hundreds of failures

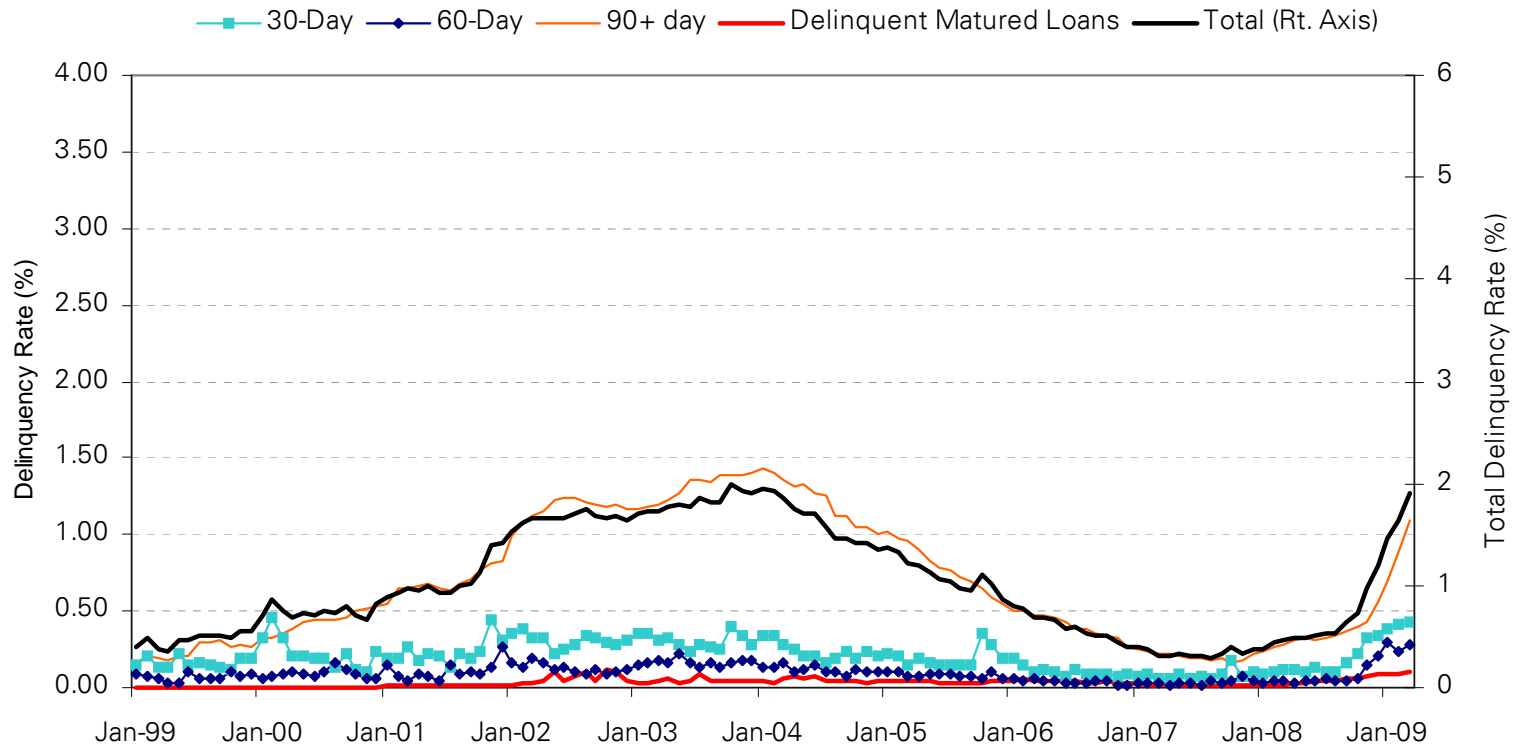


Outlook for CMBS

Pace of deterioration in loan performance virtually unprecedented

- More severe even than early 1990s
- Total delinquency rate (fixed rate CMBS) reached 5.5% in September, nearly 3-times its March level and nearly 9-times its September 2008 level
- Delinquency rates will continue to rise over next 12-24 months, spurred by billions of dollars of pro forma loans that never stabilized and resetting partial IO loans
- With 2,759 delinquent *fixed rate* loans (\$37.1 billion) special servicers will soon be overwhelmed
- We project *total* losses will reach 9% for the CMBS universe (\$65-\$85 billion), and 17% for the 2007 vintage

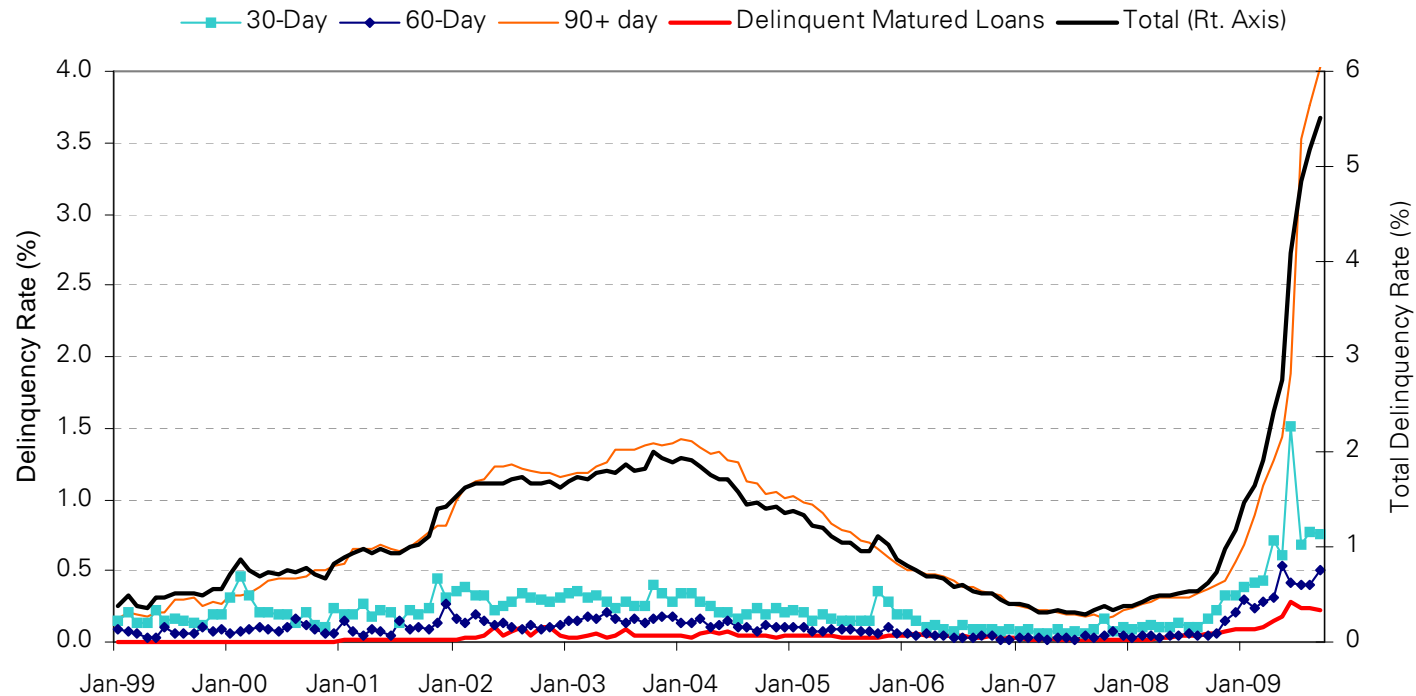
Where we were at the end of Q1 2009...



Source: Intex, Trepp

- Our view as of Q1 2009: Total delinquency rate in excess of 3.5% by end of 2009, and 5-6% by late 2010

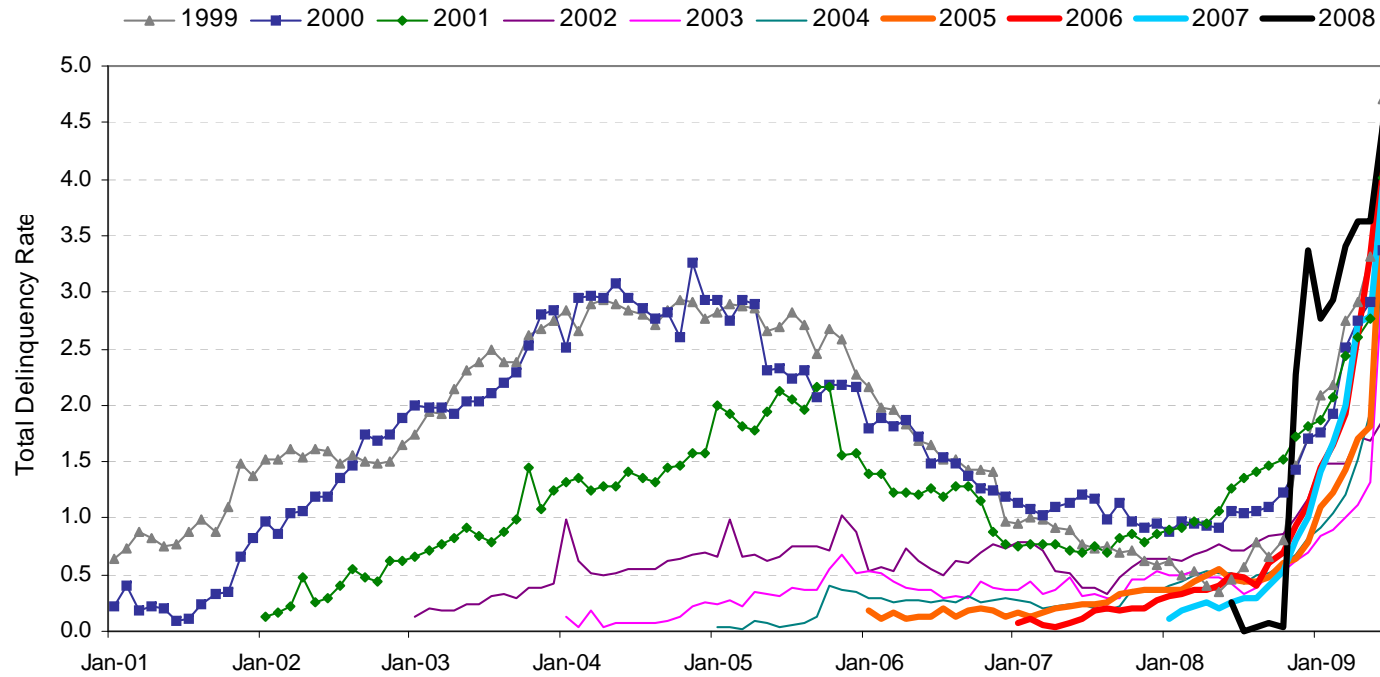
Where we are at the end of Q3 2009...



Source: Intex, Trepp

- Our view as of Q3 2009: Total delinquency rate to reach 6.5-7.5% by end of 2009 and 8-9% by end of 2010

Even highly seasoned vintages showing very significant deterioration



Source: Intex, Trepp

- Maturity defaults removed from the data, leaving only term-delinquencies

Two major sources of problems that are likely to drive default rates much higher over the next 6-18 months

- Non-stabilized pro forma loans
- Resetting partial IO loans

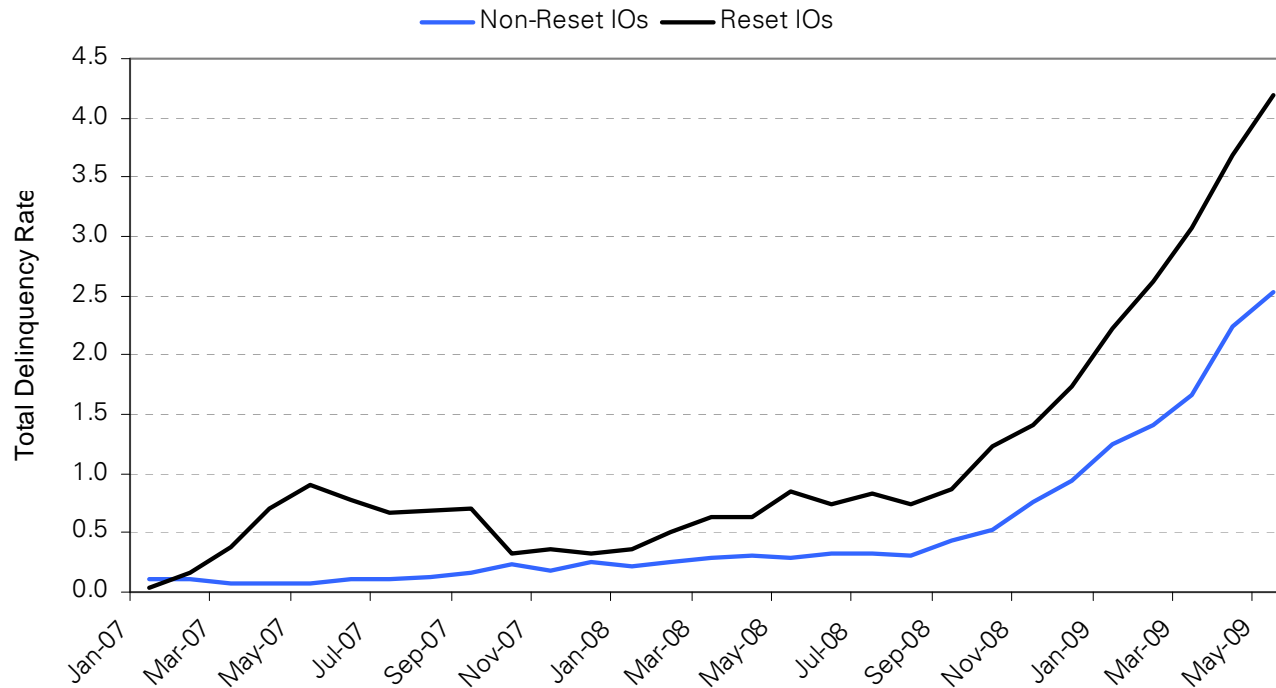
\$15 billion of large pro forma fixed rate loans had not stabilized as of 2007

Property Sector	Balance (\$ Bil)	Percentage
Multifamily	5.86	38%
Office	5.42	35%
Retail	1.96	13%
MU	0.70	5%
Hotel	0.65	4%
Industrial	0.47	3%
Other	0.26	1%
Total	15.32	100%

Source: Intex, Trepp

- Less than 1% currently delinquent
- Pro forma loans are now highly unlikely to stabilize
- A very large percentage of these loans will default over the next 6 to 12 months, as their interest reserves are become depleted

Partial IO loans exhibiting significantly greater performance deterioration post reset



Source: Intex, Trepp

- Delinquency rate for reset partial IO loans roughly twice that of other loans
- Nearly \$100 billion of partial IOs resetting through mid 2012
- Average increase in debt service of 20-25%

Massive refinancing risk for loans that survive to maturity

- CRE prices likely to decline 30-35% due to dramatic tightening in underwriting and financing terms, and another 10-15% in response to contracting cash flows (recession)
- Simultaneously, allowable leverage has declined from 80-85LTV to 60-65LTV
- The combination is highly problematic, especially for 2005-2007 vintage loans
- Simple example: An 80 LTV loan on a \$100MM property where property price drops 40%

Massive refinancing risk for loans that survive to maturity - Continued

- In excess of 65% of loans (\$400 billion in CMBS) may not qualify to refinance
- Over \$2 trillion in commercial mortgages (excluding construction loans) maturing between now and 2013 in CMBS, banks and life company portfolios
- These problems are not the result of dislocated financing markets, rather they reflect the simple fact the majority of loans do not qualify for a loan large enough to retire the existing debt
- Improvements in rents and vacancy rates are also extremely unlikely to be sufficient to materially affect the scope of the problems

DB term and maturity default related loss estimates

Origination Vintage	Projected Term			Projected Maturity			Existing	Projected Total	
	Default (%)*	Loss (%)*	Severity (%)*	Default (%)*	Loss (%)*	Severity (%)*	Loss (%)*	Default (%)*	Loss (%)*
2000	2.6	1.4	52.3	4.3	0.9	21.9	1.6	6.9	3.9
2001	2.5	1.2	48.7	8.5	1.9	21.9	1.1	11.1	4.2
2002	3.1	1.4	46.0	12.9	2.2	17.2	0.5	16.0	4.2
2003	4.0	1.9	47.4	14.1	2.2	15.5	0.2	18.2	4.3
2004	6.5	2.9	44.8	20.6	3.0	14.7	0.1	27.1	6.0
2005	8.7	4.2	48.6	32.5	5.5	16.9	0.1	41.2	9.8
2006	14.7	7.4	50.3	31.0	5.5	17.9	0.0	45.6	12.9
2007	21.7	12.1	55.8	38.4	9.2	23.9	0.0	60.0	21.3
2008	17.7	8.5	47.9	19.8	5.7	28.7	0.0	37.5	14.2
2000-2008	12.2	6.3	52.2	27.7	5.5	19.7	0.2	39.8	12.0
2005-2008	15.8	8.3	52.9	34.0	6.9	20.3	0.0	49.7	15.3

* Percent calculated with respect to original balance

Source: Deutsche Bank, Intex

- Very high forecasted total losses for the 2005-2008 vintages; much lower for the pre-2005 vintages
- Losses split fairly evenly between term and maturity default related



Potential Impact on Banks

Our basic thesis:

- The dramatic growth of CMBS during 2004-2007 came at the expense of banks, especially regional and community banks
- For higher quality properties with more stabilized cash flows, CMBS offered lower borrowing costs and higher leverage
- This siphoned off the better lending opportunities, pressuring banks to become more concentrated in riskier types of lending, e.g. construction
- Note that this is the opposite of the situation in residential real estate
- To extent this is true, we can use our work on expected losses in CMBS to calculate a lower bound to expected CRE losses in banks

As of Q2 2009, bank exposure to “commercial real estate” loans consisted of

- \$534 billion of construction and land development loans
- \$1,055 billion of core commercial real estate loans
- \$220 billion of multifamily loans

In exploring bank's exposure to commercial real estate, we use the following sized-based groups

Group	# of Institutions	Aggregate Assets		Construction Loans		Core CRE Loans		Multifamily Loans	
		Bal (\$ Bil)	% of Total	Bal (\$ Bil)	% of Total	Bal (\$ Bil)	% of Total	Bal (\$ Bil)	% of Total
1-4	4	7,415	42	91	17	179	17	61	28
5-19	15	4,849	28	69	13	155	15	26	12
20-50	30	1,837	10	83	16	150	14	39	18
51-97	48	706	4	56	10	93	9	19	9
> 98	7445	2,772	16	236	44	477	45	74	34
Total	7,542	17,579	100	534	100	1,054	100	219	100

Group	Total Assets (Range)	Bank Type
1-4	\$1.28 - \$2.25 trillion	Global Banks
5-19	\$130 - \$890 billion	Large regional banks
20-50	\$25 - \$130 billion	Medium-sized regional banks
51-97	\$10 - \$25 billion	Smaller regional and larger community banks
> 98	< \$10 billion	Community banks

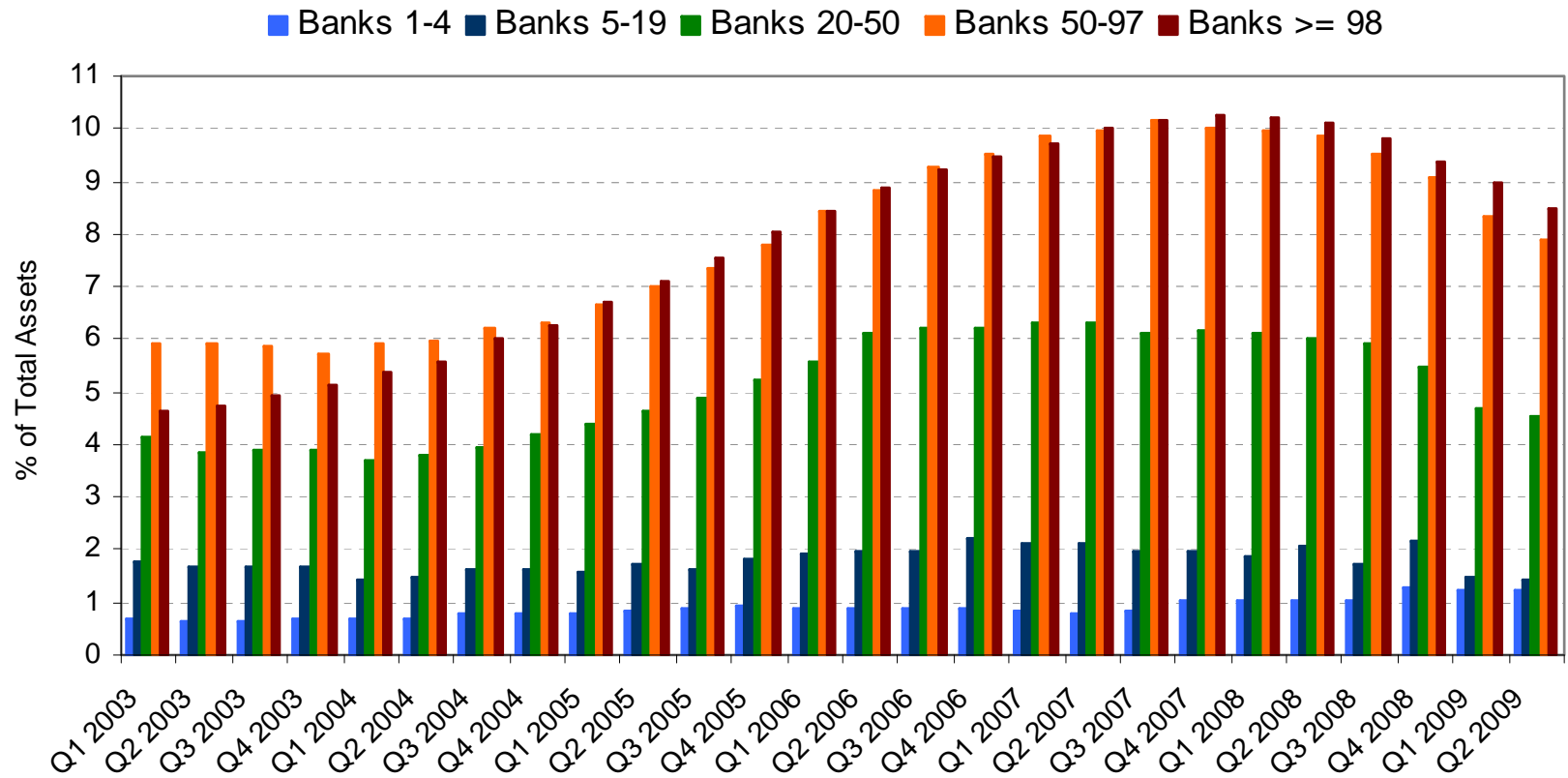


Construction Loans

Construction loans will be the epicenter of bank loan problems

- By far the riskiest type of loan product in bank portfolios
- Significant proportion represents loans to homebuilders
- Market currently penalizing properties with vacancy issues very severely
- Newly constructed (or only partially constructed) properties are the poster children for vacancy problems in CRE
- → Values of most newly constructed properties are down massively
- Expect very high default rates as well as very high loss severity rates, possibly in excess of 50%
- → Total losses as high as 25% or more

Construction loan exposure far higher for regional and community banks than for money center banks



Source: Deutsche Bank, SNL Financial

For smaller banks, construction loan exposure nearly doubled between 2004 and 2007

- Exposure for largest money center banks is very low and did not grow to the same extent as for regional and community
- Growth in bank exposure to construction loans beginning in 2005 is consistent with the view of CMBS siphoning off lending opportunities on larger, more stabilized properties and forcing banks to increase their focus on riskier types of lending opportunities

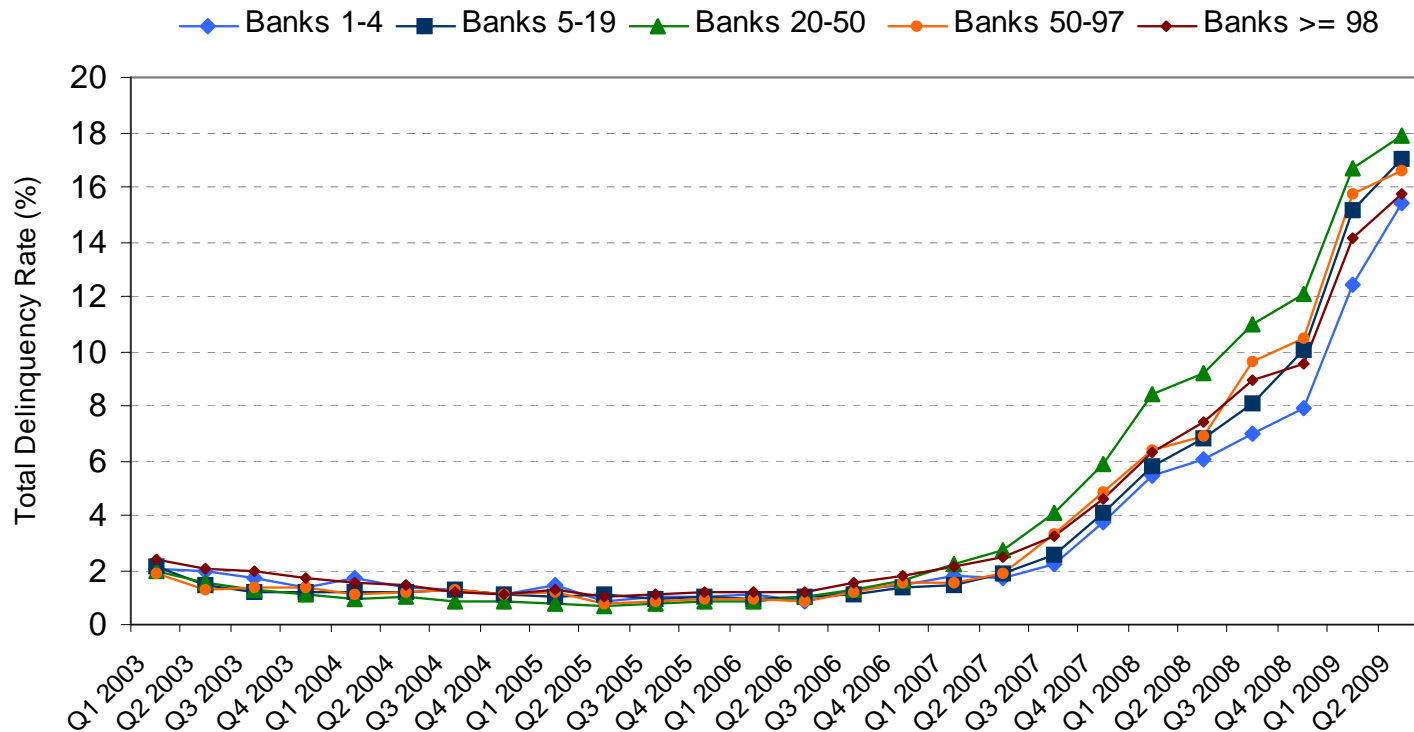
A large number of banks have very higher exposures to construction loans

Construction Loan Exposure (% of Total Assets)	Institutions		Assets	
	#	Proportion >=	Balance (\$)	Proportion >=
0	763	100.0	1,475	100.0
0-1	1118	89.9	7,054	91.6
1-2	790	75.1	2,748	51.5
2-3	620	64.6	1,821	35.9
3-4	539	56.4	652	25.5
4-5	465	49.2	556	21.8
5-6	339	43.1	394	18.6
6-7	357	38.6	339	16.4
7-8	343	33.8	618	14.4
8-9	255	29.3	224	10.9
9-10	269	25.9	187	9.7
10-15	816	22.3	904	8.6
15-20	448	11.5	311	3.5
20-25	205	5.6	178	1.7
25-30	117	2.9	64	0.7
30-35	60	1.3	22	0.3
35-40	17	0.5	12	0.2
> 40	21	0.3	21	0.1

Source: Deutsche Bank, SNL Financial

- Nearly 1,700 banks with \$1.5 trillion in assets have in excess of 10% exposure to construction loans

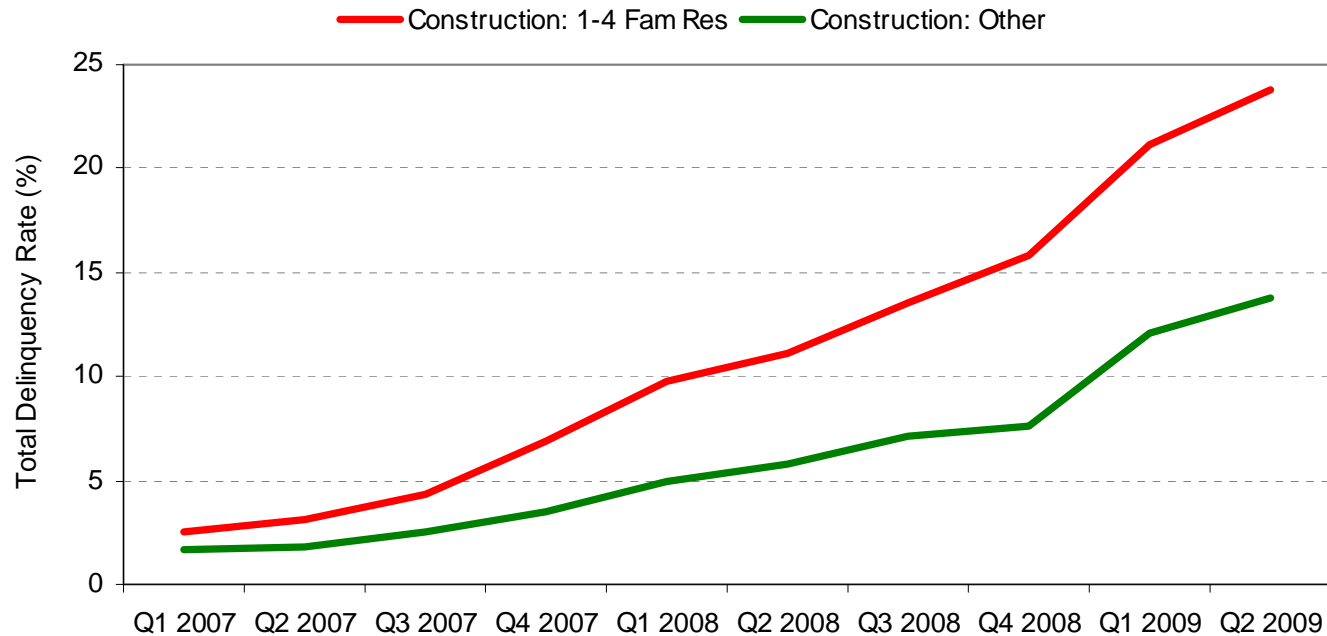
Current 16% delinquency rate may seem high, but when interest reserves are exhausted, defaults will soar



Source: Deutsche Bank, S&P Financial

- Construction loans structured with upfront reserves used to cover interest payments until project is completed
- Plummeting short-term interest rates mean interest reserves will last longer
- When exhausted, however, defaults likely to skyrocket

Construction loans for residential real estate massively underperforming other types of construction loans



Source: Deutsche Bank, SNL Financial

- Bulk of “other” category of construction loans likely to consist largely of commercial construction loans
- We expect performance of commercial construction loans will deteriorate sharply going forward

All five size groups have similar proportions of residential and “other” construction loans

Banks	% of Construction Loans That Are:	
	Residential	Other
1-4	22	78
5-19	25	75
20-50	19	81
51-97	22	78
<=98	27	73

Source: Deutsche Bank, SNL Financial

Distribution of delinquency rates on construction portfolios across banks is large

Construction Loan Delinquency Rate (%)	# of Banks	Total Assets (\$ Billions)	% of Total Bank Assets
0	2,626	2,036	12.7
0-5	1,278	749	4.7
5-10	740	3,041	18.9
10-15	568	3,664	22.8
15-20	403	4,166	25.9
20-25	294	690	4.3
25-30	240	806	5.0
30-35	151	280	1.7
35-40	125	205	1.3
>40	345	437	2.7
Total	6,770	16,074	100

Source: Deutsche Bank, SNL Financial

- 15% of banks (by assets) are experiencing delinquency rates in excess of 20% on their construction portfolios

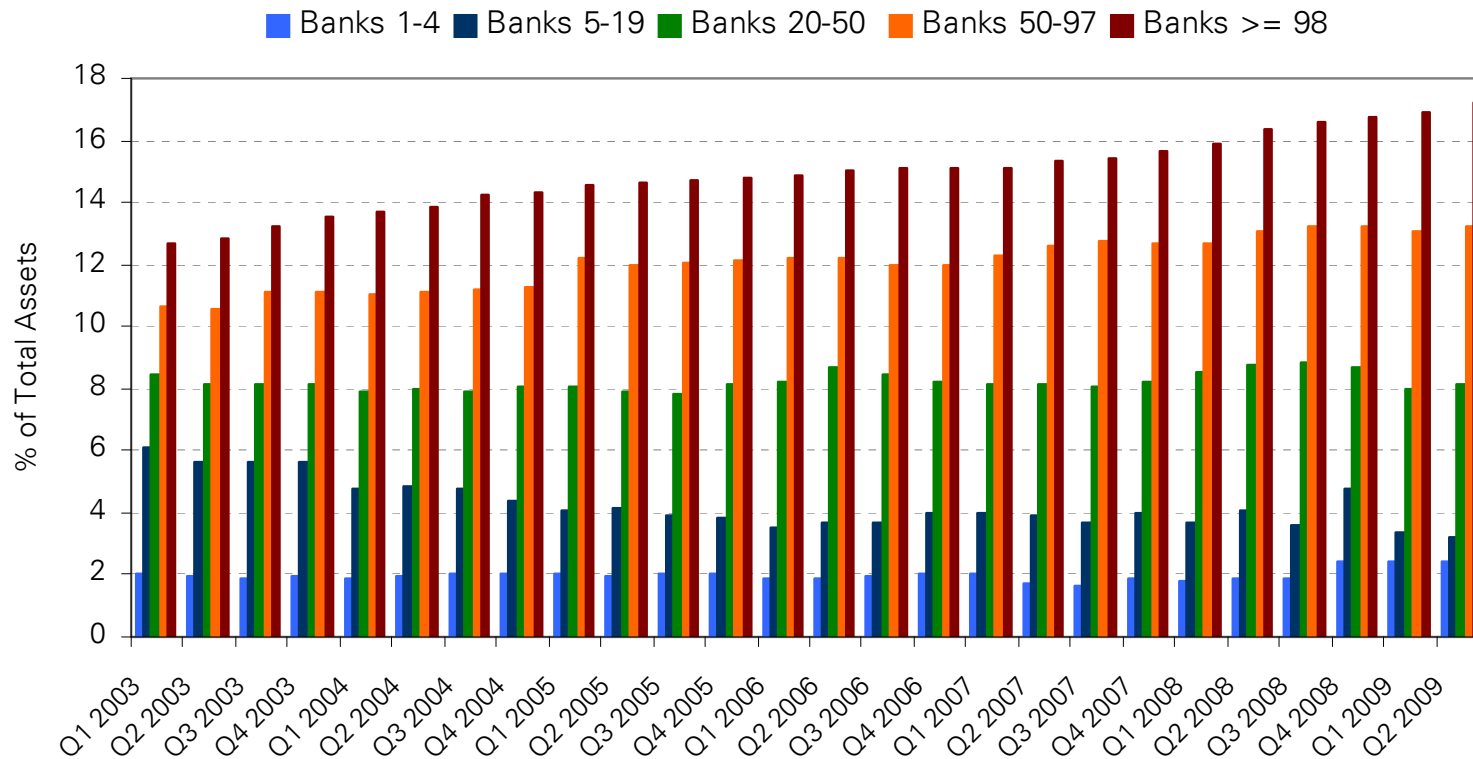


Core Commercial Real Estate Loans

Bank's core commercial real estate loans likely to be at least as risky as those in CMBS

- Bank core CRE lending concentrated to much greater extent in more transitional assets
 - Transitional assets intrinsically riskier, particularly in a severe economic downturn
- Bank lending is much shorter term than fixed rate CMBS, typically 3-5 years versus 7-10 years for fixed rate CMBS
 - Much greater proportion of bank loans were originated at the peak of the market and will mature at the bottom of the market, i.e. 2010-2012
- Greater exposure to:
 - Smaller, lower quality properties with less diversified tenant base
 - “Special purpose” properties
 - Condo conversion loans
 - Properties in secondary and tertiary locations
 - Completed construction loans, mini perms
 - Floating rate => lower delinquency rates

Again, exposure to core commercial real estate loans is much higher for regional/community banks



Source: Deutsche Bank, SNL Financial

- Average exposure for the largest money center banks is quite low -- under 2%

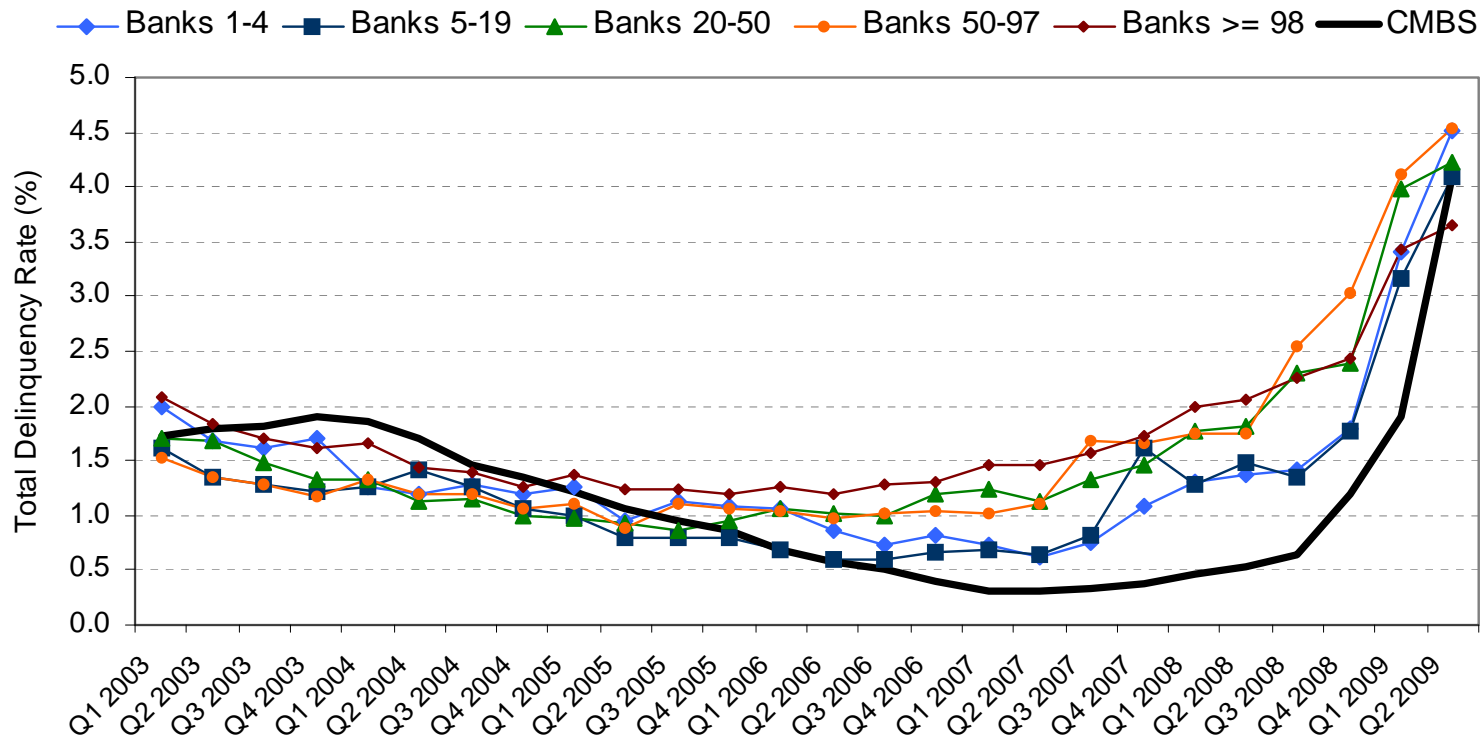
A large number of banks also have very high exposures to core CRE loans

CRE Loan Exposure (% of Total Assets)	Institutions		Assets	
	#	Proportion >	Balance (\$)	Proportion >
0	139	100.0	202	100.0
0-1	220	98.0	4,218	98.8
1-2	204	94.7	2,759	73.5
2-3	196	91.7	2,353	57.0
3-4	236	88.8	149	42.9
4-5	224	85.4	542	42.1
5-6	238	82.1	119	38.8
6-7	222	78.6	1,510	38.1
7-8	226	75.3	741	29.1
8-9	224	72.0	494	24.6
9-10	206	68.7	60	21.7
10-15	1,060	65.6	1,300	21.3
15-20	1,046	50.0	837	13.5
20-25	887	34.7	616	8.5
25-30	624	21.6	429	4.8
30-35	361	12.4	176	2.3
35-40	227	7.1	87	1.2
> 40	256	3.8	114	0.7

Source: Deutsche Bank, SNL Financial

- 2,355 banks with \$1.4 trillion in assets have in excess of 20% exposure to core CRE loans

Total delinquency rate for bank core CRE loans now approaching the 4-4.5% range



Source: Deutsche Bank, Intex, SNL Financial

- Total delinquency rates for core CRE bank loans have been significantly higher than for CMBS loans in recent years

Distribution of delinquency rates for core CRE portfolios across banks is also quite large

Core CRE Loan Delinquency Rate (%)	# of Banks	Total Assets (\$ Billions)	% of Total Bank Assets
0	1837	1,222	7.4
0-1	837	929	5.6
1-2	752	2,569	15.6
2-3	642	1,120	6.8
3-4	485	3,578	21.7
4-5	360	2,177	13.2
5-6	296	2,687	16.3
6-7	260	458	2.8
7-8	182	213	1.3
8-9	158	82	0.5
9-10	129	271	1.6
10-15	370	170	1.0
>15	340	999	6.1
Total	6,648	16,474	100

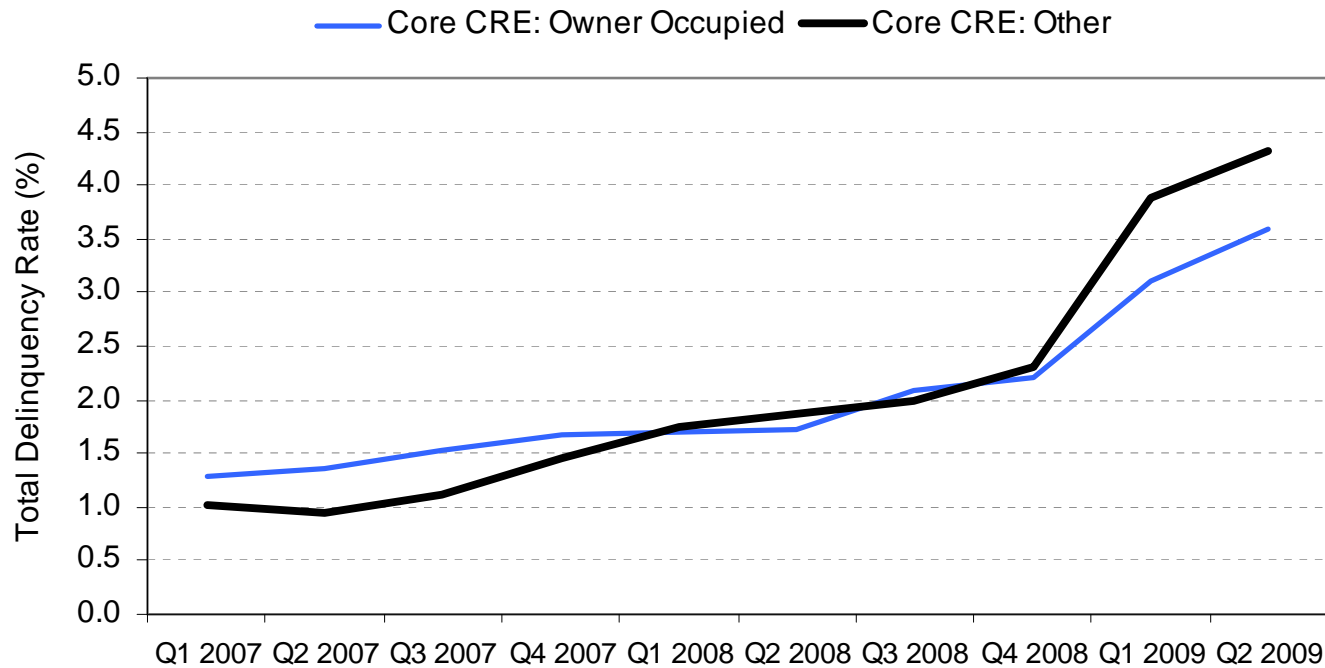
Source: Deutsche Bank, Intex, SNL Financial

- Approximately 15% of banks (by assets) have core CRE delinquency rates in excess of 6%

Loans on “owner-occupied” properties

- Common bank claim: loans on owner-occupied properties have superior risk characteristics relative to non-owner-occupied
 - Less likely to be a speculative investment
 - Often full or partial recourse to the borrower
- 45% of core CRE loans in bank portfolios are classified as owner-occupied
- Downside of owner-occupied
 - Likely to be small, special purpose properties in tertiary markets
 - Undiversified tenant base; often single-tenant
 - Recourse is to an entity with (typically) few assets
 - Likely to exhibit very high loss severity in event of default

Loans on owner-occupied properties have outperformed only moderately and only during the last two quarters



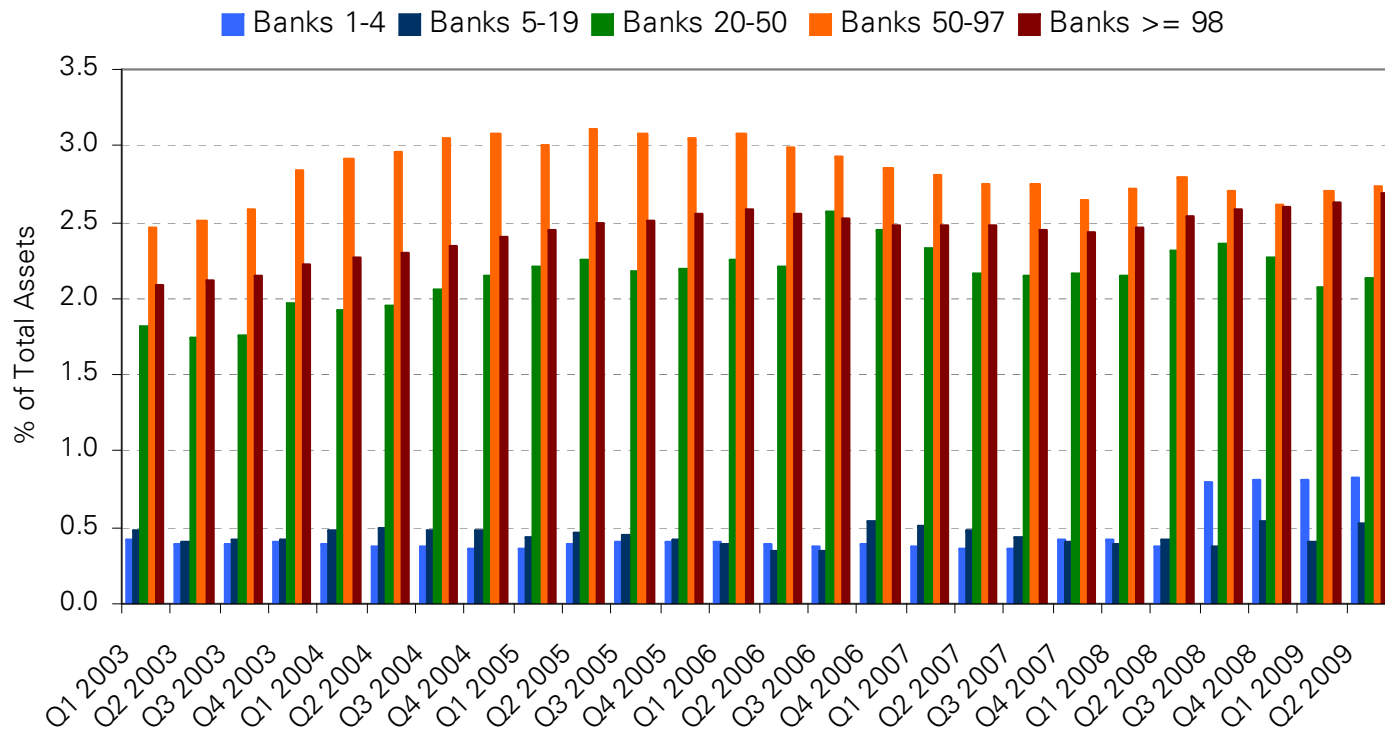
Source: Deutsche Bank, Intex, SNL Financial

- Loss severities are the key question here



Multifamily Loans

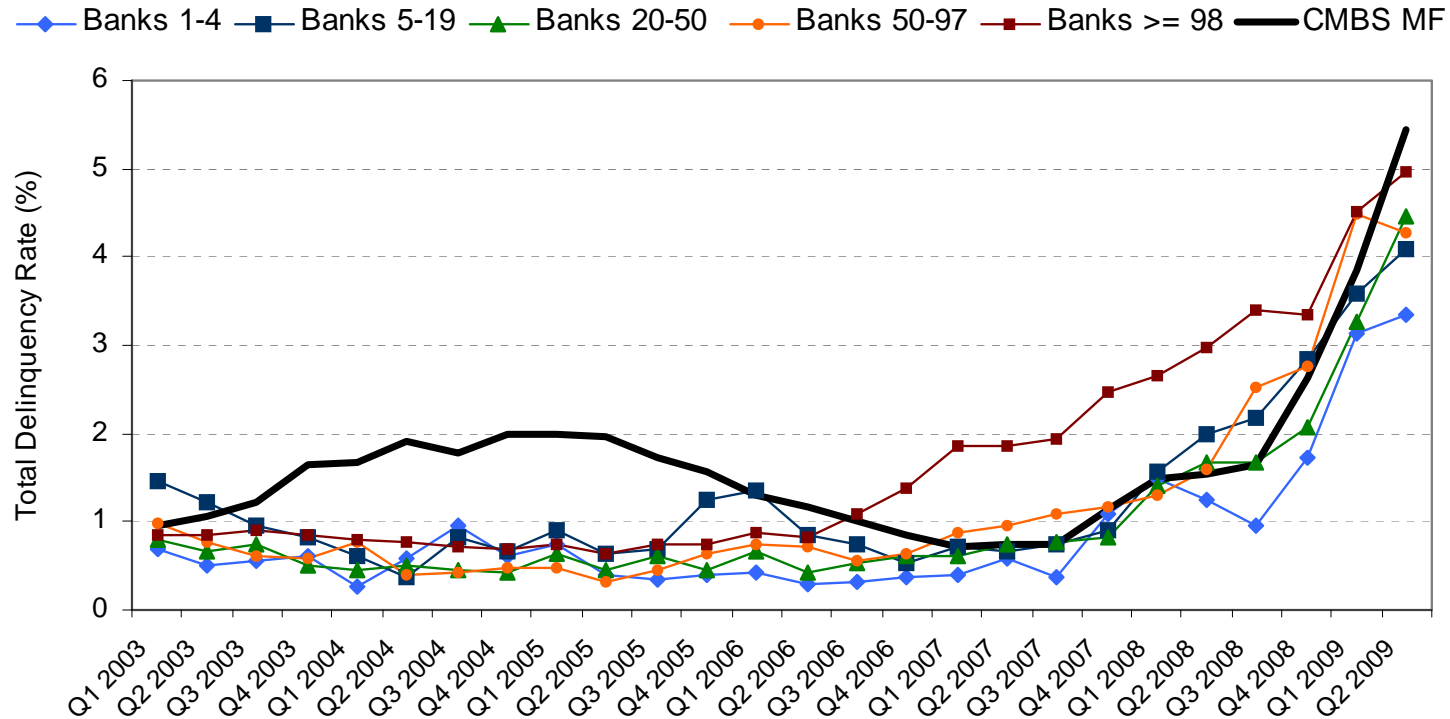
Small to medium size banks also have much larger exposures to loans on multifamily properties



Source: Deutsche Bank, Intex, SNL Financial

- However, for all size groups these exposures are considerably smaller than for construction and core CRE loans

Bank multifamily loans are experiencing severe deterioration in performance



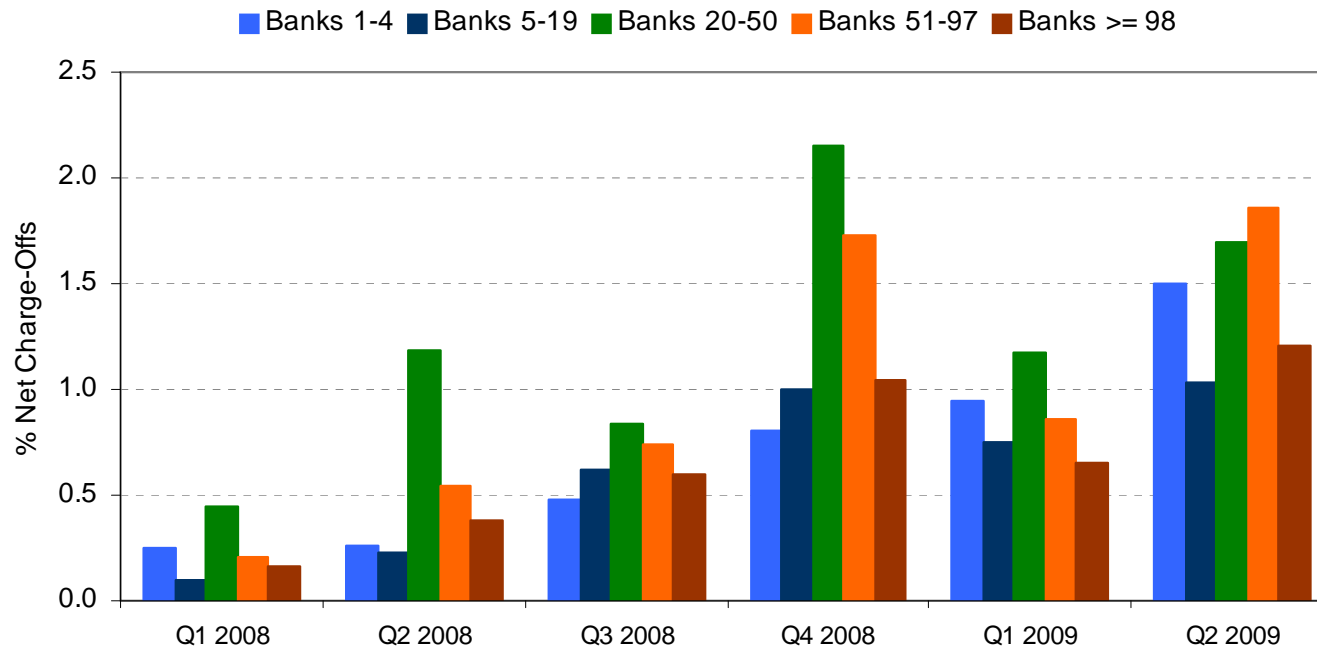
Source: Deutsche Bank, Intex, SNL Financial

- Bank multifamily loans are performing in line with CMBS multifamily loans
- Delinquency rates were in the 4.5% range as of June 2009



Net Charge-Offs and Loan Reserves

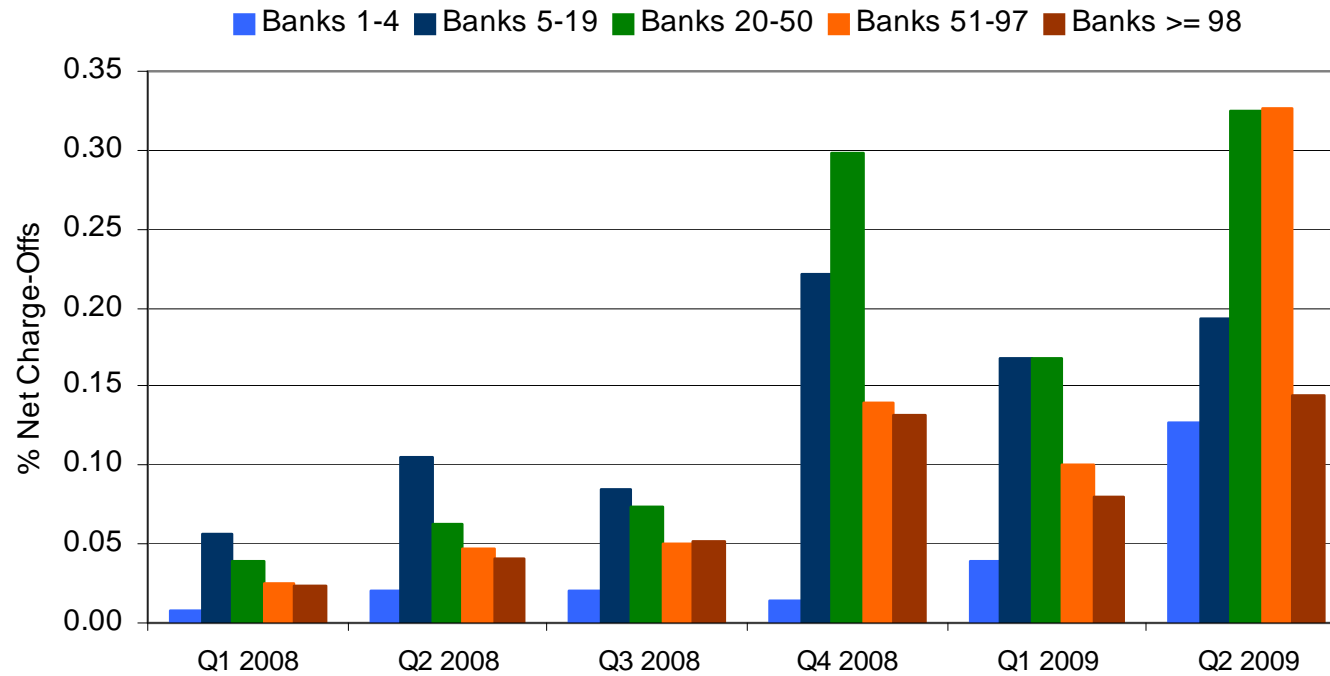
To date, net charge-offs on construction loans have been very low



Source: Deutsche Bank, Intex, SNL Financial

- Average cumulative % net charge-offs (relative to the value of construction portfolio at Q1 2008) have been 4.2%, 3.7%, 7.5%, 5.9% and 4.0%, respectively, for the five size groups

Net Charge-Offs also extremely low for core CRE loans



Source: Deutsche Bank, Intex, SNL Financial

- Average cumulative % net charge-offs are below 1% for all size categories

Smaller banks have clearly not reserved adequately for expected CRE loan losses

Group	# of Institutions	Ratio CRE Loans/ Total Loans	Ratio Loan Reserves/ CRE Loans	Ratio Loan Reserves/ Expected CRE Losses
1	4	10.2	36.8	290.6
2	15	18.8	17.0	133.7
3	30	24.5	11.0	83.8
4	48	33.8	6.3	48.1
5	7,445	40.0	4.2	32.8
Total	7,542	21.9	13.4	104.4

Source: Deutsche Bank, Intex, SNL Financial

- Relative to CRE exposure reserves appear very large for larger banks
- But this partly reflects the fact that CRE exposure is a much smaller part of the total loan portfolio



The Expected Damage

Expected bank losses on core CRE, construction and multifamily loans in the \$200-\$300 billion range

Estimated Losses % of Assets	Size Group									
	1-4		5-19		20-50		51-97		≥98	
	# Banks	\$	# Banks	\$	# Banks	\$	# Banks	\$	# Banks	\$
0-1	3	5,586	7	2,807	5	218	4	29	1,775	242
1-2	1	595	3	532	4	320	4	67	1,216	338
2-3			1	179	4	311	7	109	986	383
3-4			2	281	4	230	5	68	749	324
4-5					2	97	7	89	635	266
5-6					2	85	3	37	437	246
6-7							4	58	324	160
7-8					1	34	1	16	180	82
8-9							1	8	126	69
9-10									63	33
10-11									33	12
11-12									20	12
>12									19	8

Source: Deutsche Bank, Intex, SNL Financial

- CRE related loan losses could potentially be quite high for a large number of banks, particularly regional and community banks

Expected losses as a percentage of Tier 1 capital suggests CRE *alone* could trigger many bank failures

Expected CRE Losses As % Of Tier 1 Capital	# of Institutions	Total Assets (\$ Billions)
0-10	1,759	10,005
10-20	1,107	3,082
20-30	907	762
30-40	815	719
40-50	616	608
50-75	953	910
75-100	356	276
> 100	283	345
Total	6,796	16,706

Source: Deutsche Bank, Intex, SNL Financial

- CRE related loan losses could potentially be quite high for a large number of banks, particularly regional and community banks

Conclusions

- For banks, ultimate losses on CRE are likely to reach \$200-\$300 billion
- We expect banks to employ widespread extensions for the vast number of performing loans that do not qualify to refinance at maturity
- Many loans will require extremely long extensions, perhaps as long as a decade, and at significantly below-market rates
- This will give rise to large real losses, even if there is ultimately no principle loss
- CRE losses will weigh significantly on banks earnings over the next 3-5 years
- Hundreds of banks, mainly smaller regional and community banks are likely to fail as a result of their CRE exposures alone.

Appendix 1

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