

21 July 2009

Commercial Real Estate Outlook: Q2 2009

Between a Rock and a Hard Place

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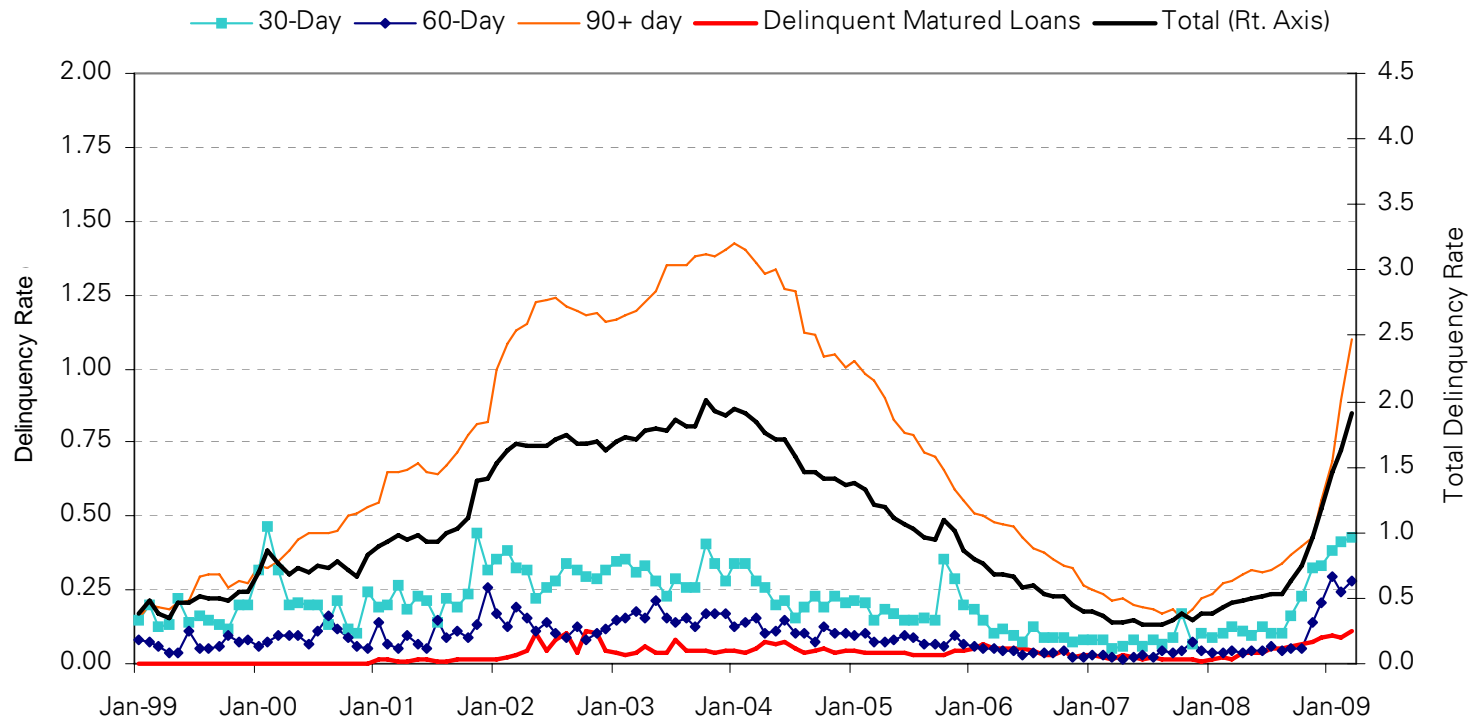
Deutsche Bank



The Rock...

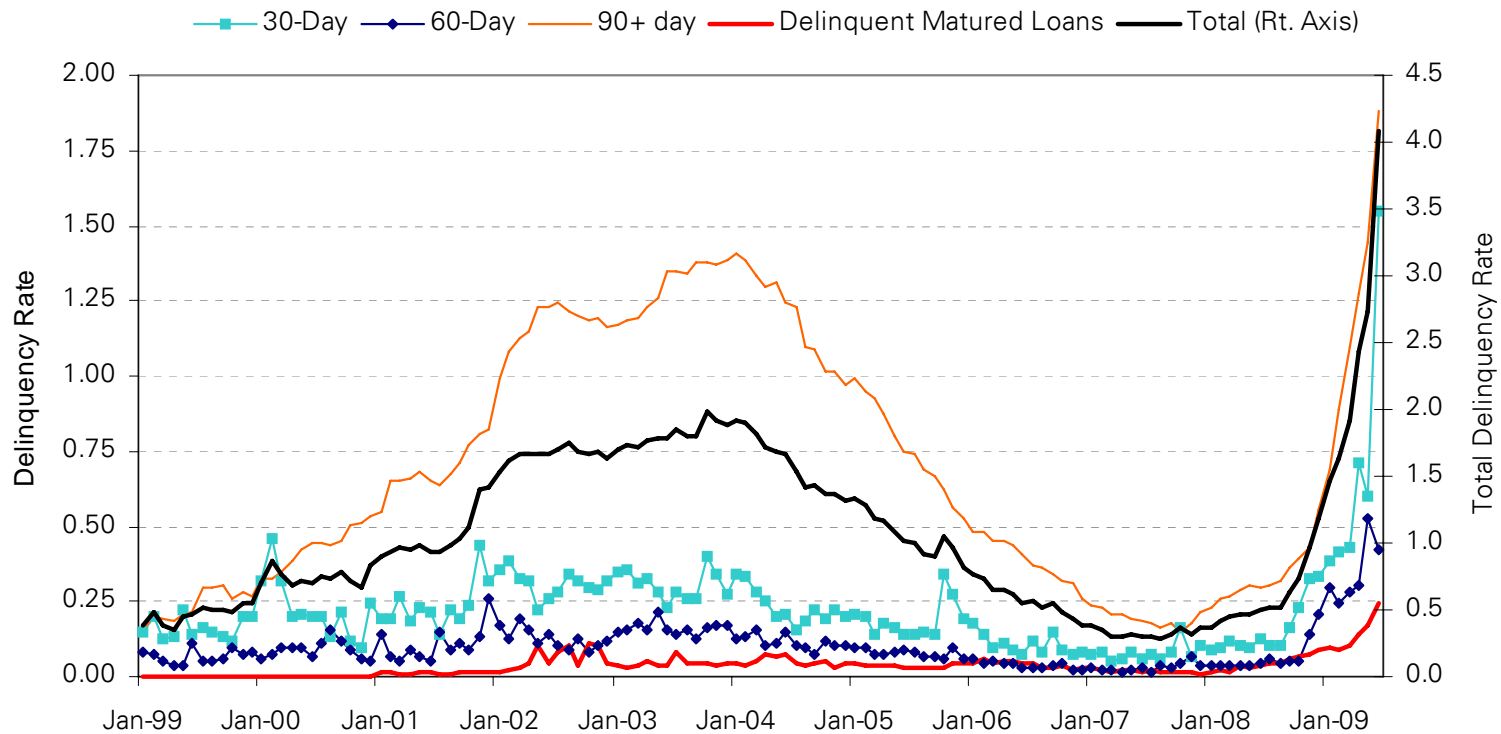
- Speed of deterioration in loan performance is unprecedented, even with relative to early 1990s
- Total delinquency rate reached 4.1% in June, 2.2 times higher than in March and 3.5 times higher than December
- Delinquency rates likely to soar higher over next 24+ months on billions of dollars of pro forma loans that never stabilized and resetting partial IO loans
- With 2,158 delinquent fixed rate loans (\$27.9 billion) special servicers may soon be overwhelmed
- DB CMBS Research projects *term* losses will reach 4.3-6.3% for the outstanding CMBS universe (\$31.3-\$46.4 billion), and 8.4-12.1% for the 2007 vintage

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



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

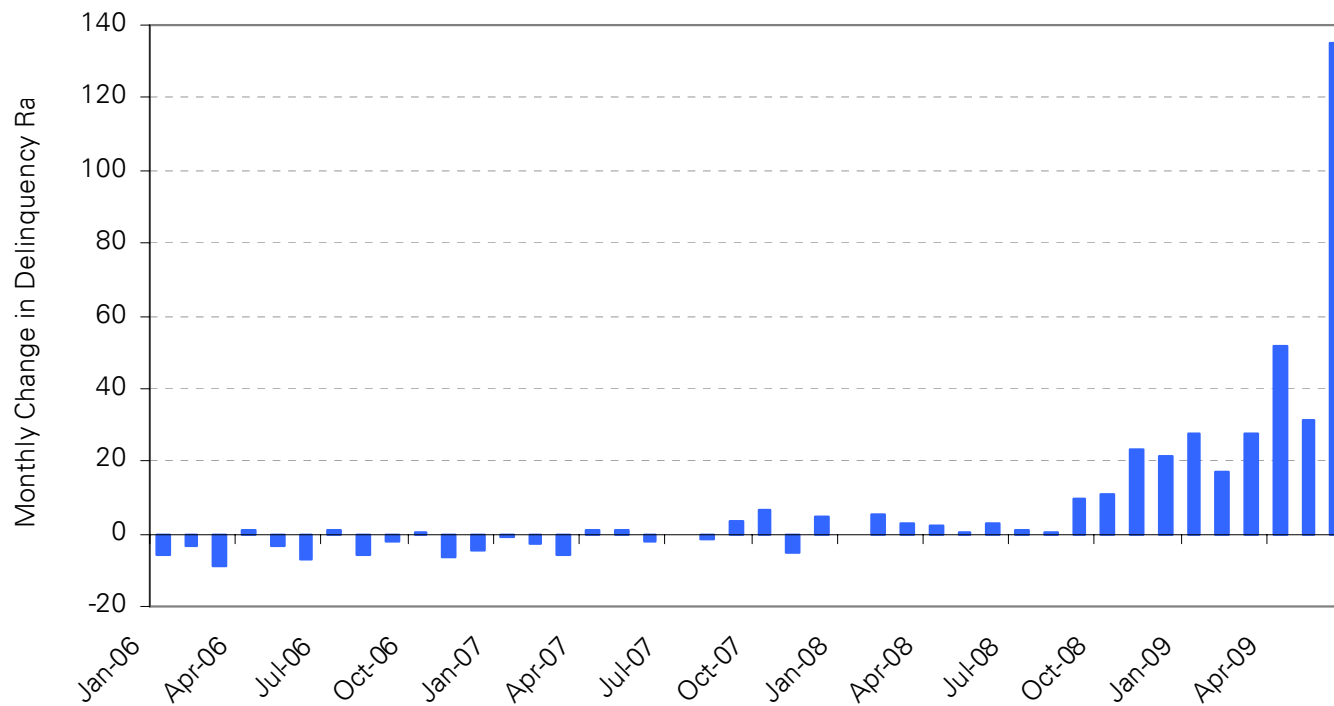
Where we are at the end of Q2 2009...



Source: Intex, Trepp

- Total delinquency rate, currently 4.1%, increasing at a staggering pace: 120% since March '09 and 450% since October 2008
- Pace of deterioration exceeds that of 1990s: Total increase of 360bp in last 10 months
- Expect aggregate delinquency rate to reach 6-7% by end of 2009

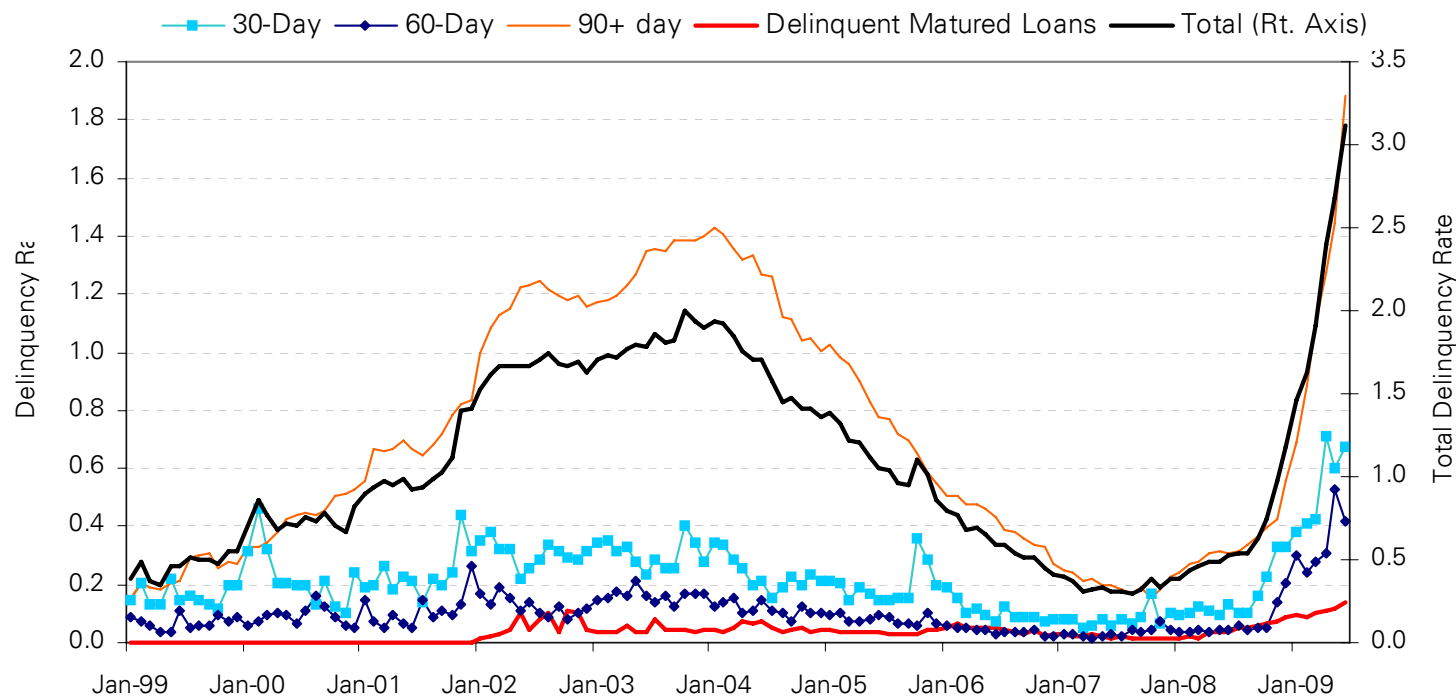
Monthly increase in total delinquency rate continues to grow



Source: Intex, Trepp

- Total delinquency rate surged 135bp in June, reflecting, in part, the GGP situation
- Average monthly increase in 2009 nearly 50bp.

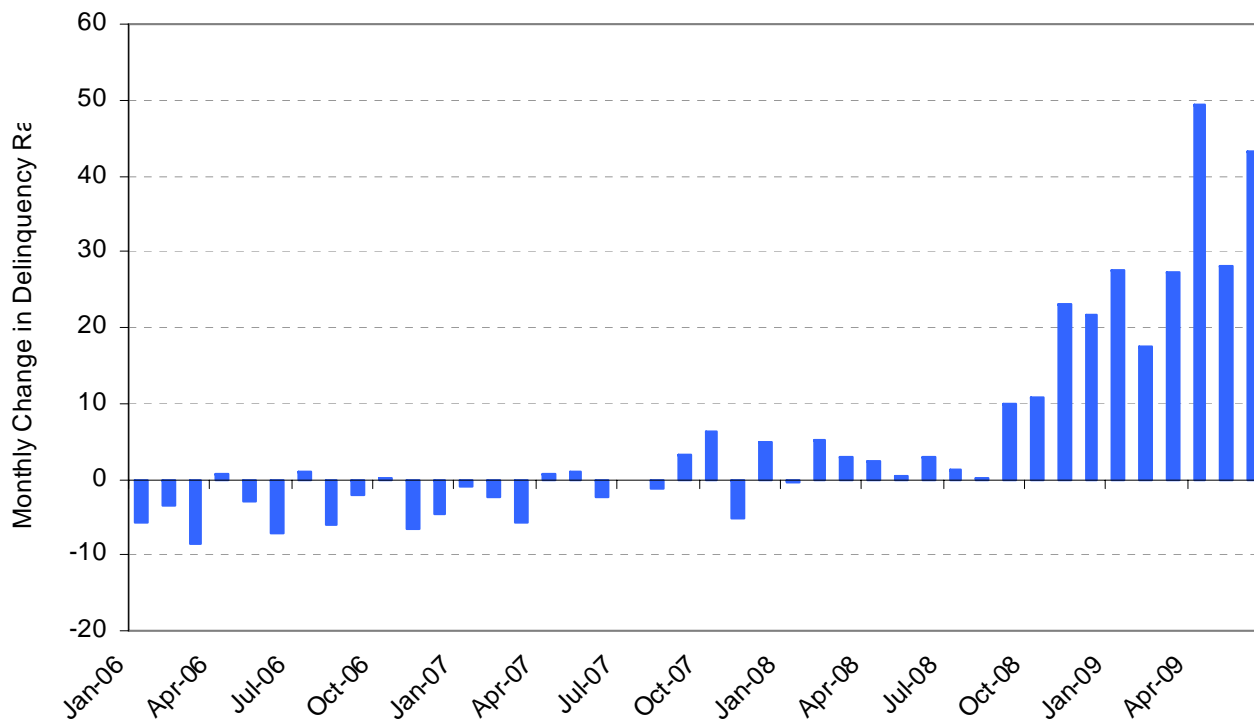
Even without GGP the degree of deterioration is extraordinary



Source: Intex, Trepp

- Total delinquency rate at 3.1%, instead of 4.1%
- Now expecting aggregate delinquency rate to reach 5-6% by year end 2009

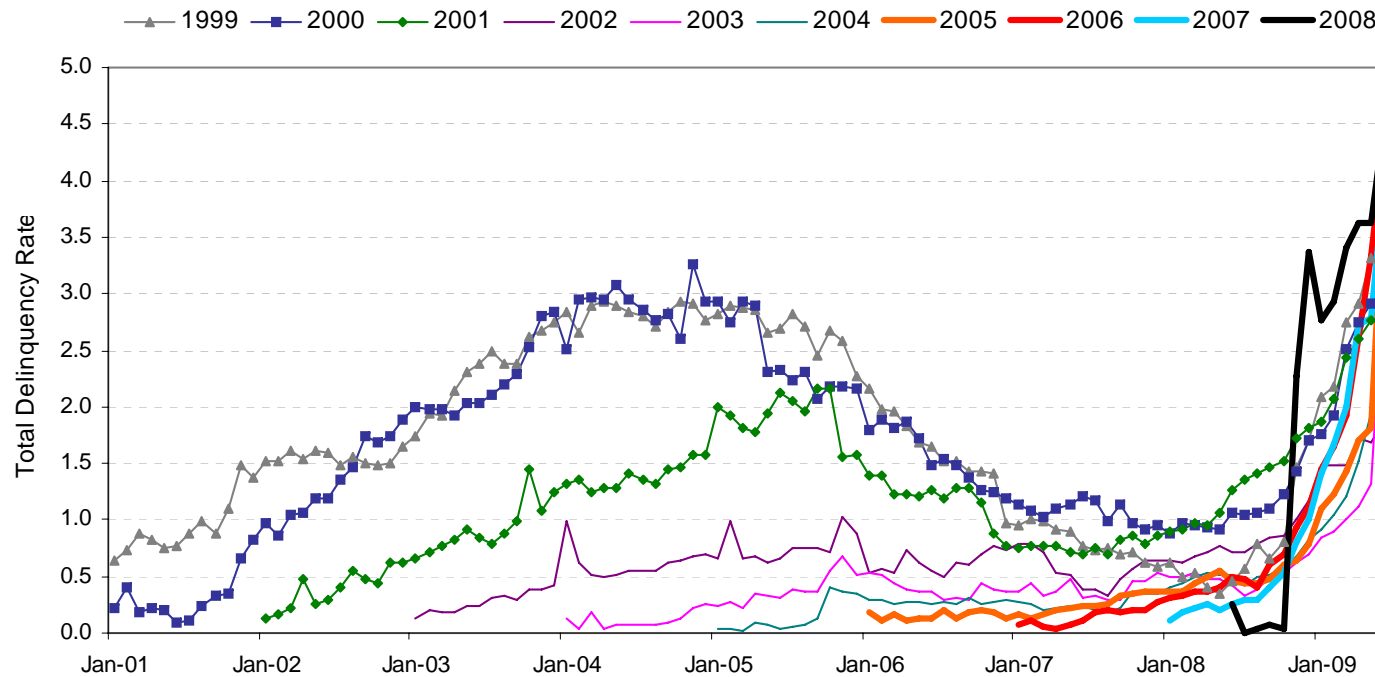
Without GGP, monthly increase in delinquency rate during June was still disastrously bad



Source: Intex, Trepp

- Even without GGP, monthly increase in total delinquency rate was 43bp in June
- Here, average monthly increase in total delinquency rate was been 32bp in first half of 2009

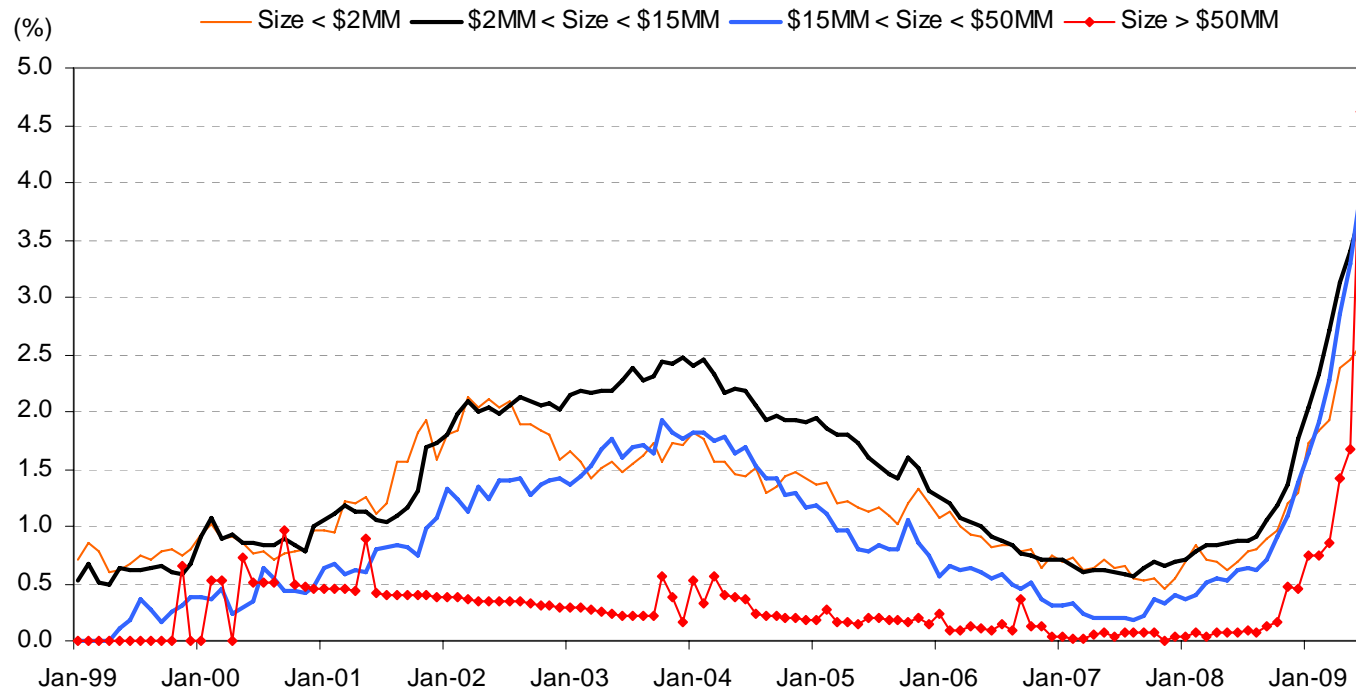
Early vintages showing very significant deterioration



Source: Intex, Trepp

- Maturity defaults removed from the data, leaving only term-delinquencies
- 2002-2004 vintages still exhibiting reasonable performance

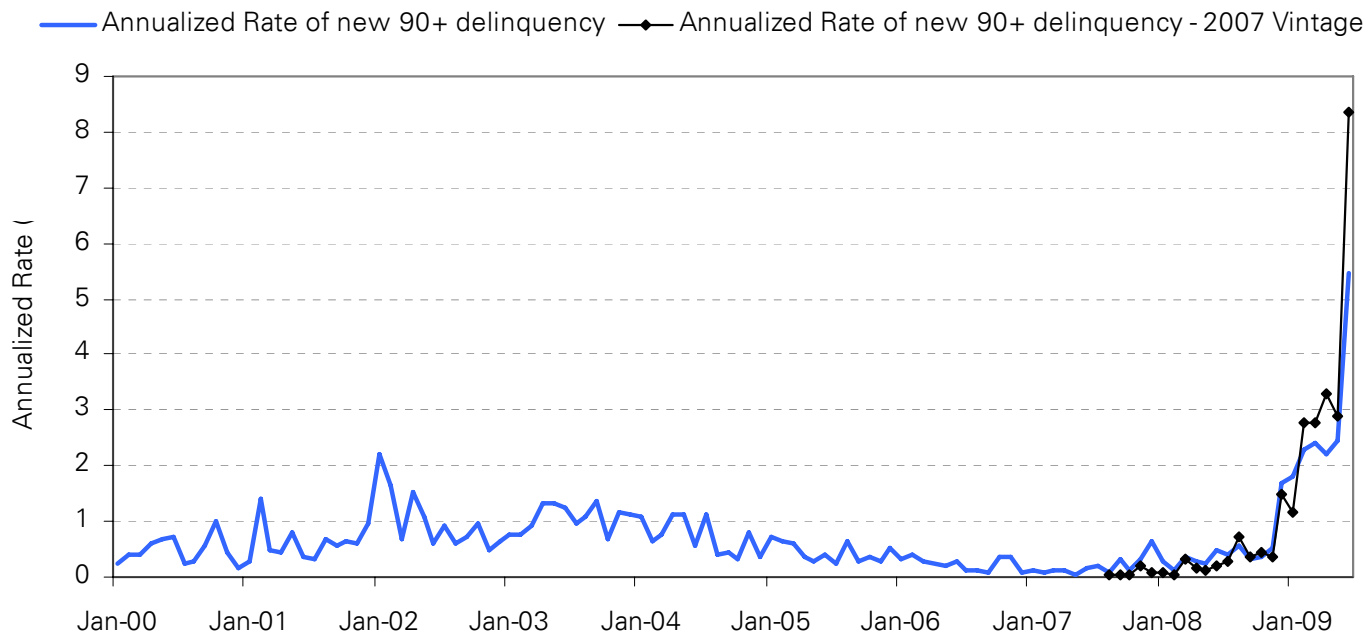
Large loans will lead the way this time around



Source: Intex, Trepp

- Historically, larger loans exhibited performance that was far superior to that of smaller loans
- The reverse is likely to be the case going forward, as underwriting weakened most for larger loans

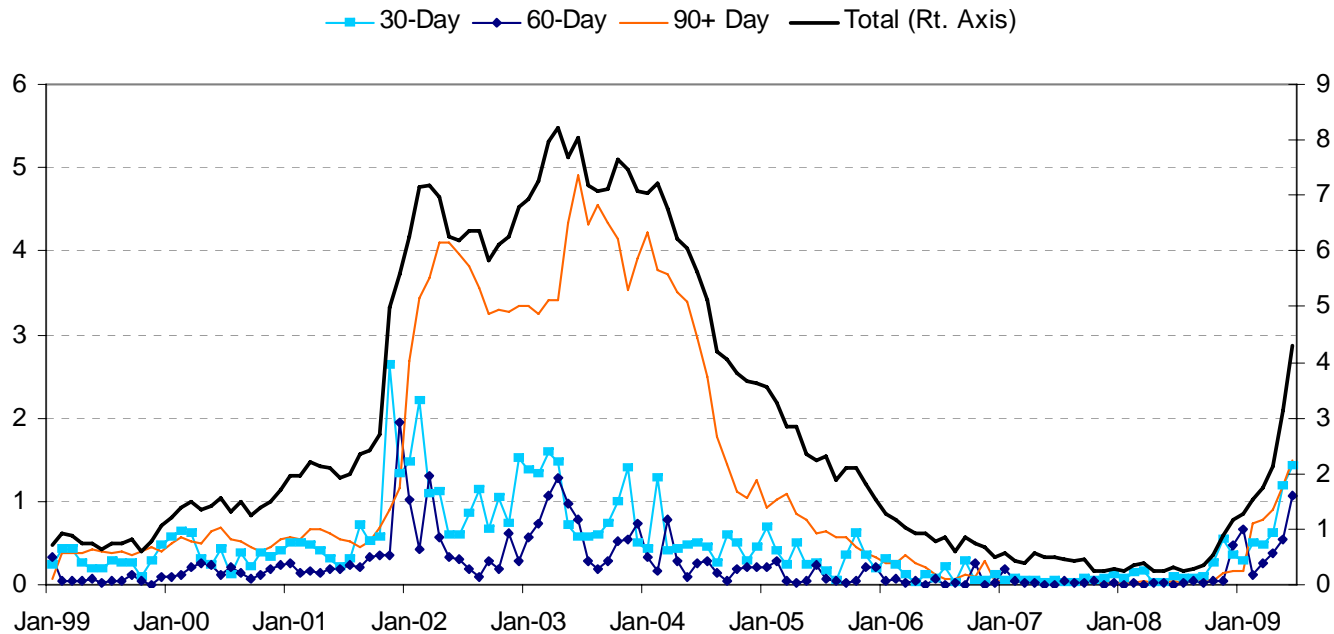
Estimated default rate has reached 5-6% per annum for the CMBS universe and 8-9% for 2007 vintage



Source: Intex, Trepp

- Approximately 2 years of defaults at this level combined with a 50% loss severity would produce the 4.3-6.3% term loss that we are projecting

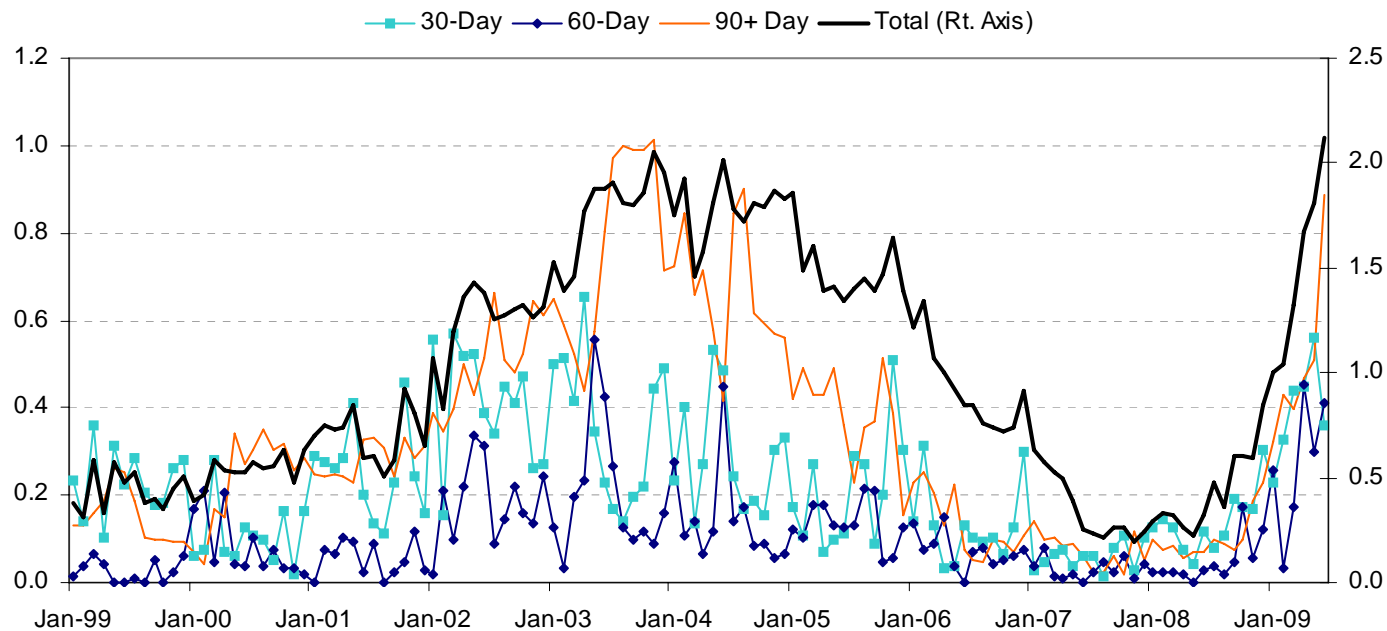
Hotel loan performance beginning to crack



Source: Intex, Trepp

- Total delinquency rate rose 39bp in April, 101bp in May and 118bp in June
- According to Smith Travel Research, average RevPAR is down 20% YOY
- This suggests far larger NOI declines due to high operating leverage
- Bottom line: This downturn may well exceed that of 2001-2003, when cumulative default rates reached nearly 25% over a three year period

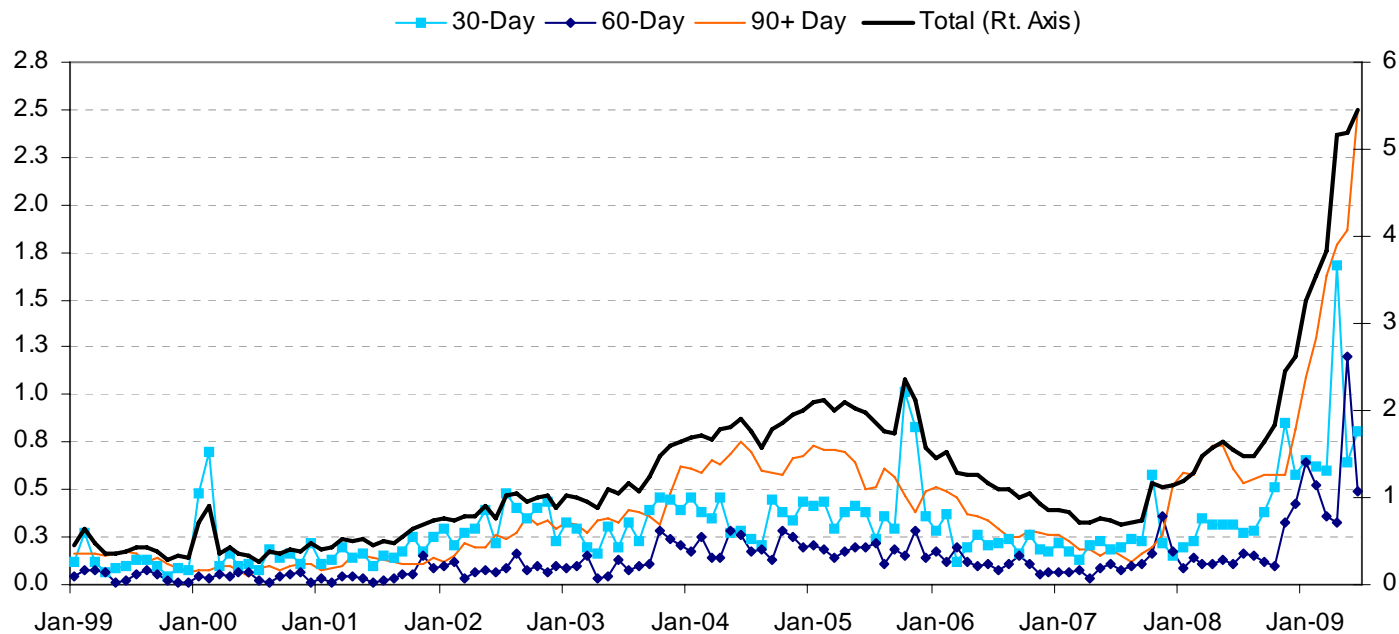
Industrial sector showing relatively moderate deterioration



Source: Intex, Trepp

- Deterioration has been relatively restrained to date
- But declining production and collapsing international trade (i.e. many ports seeing cargo traffic down 30%) could pose problems for the demand for industrial space

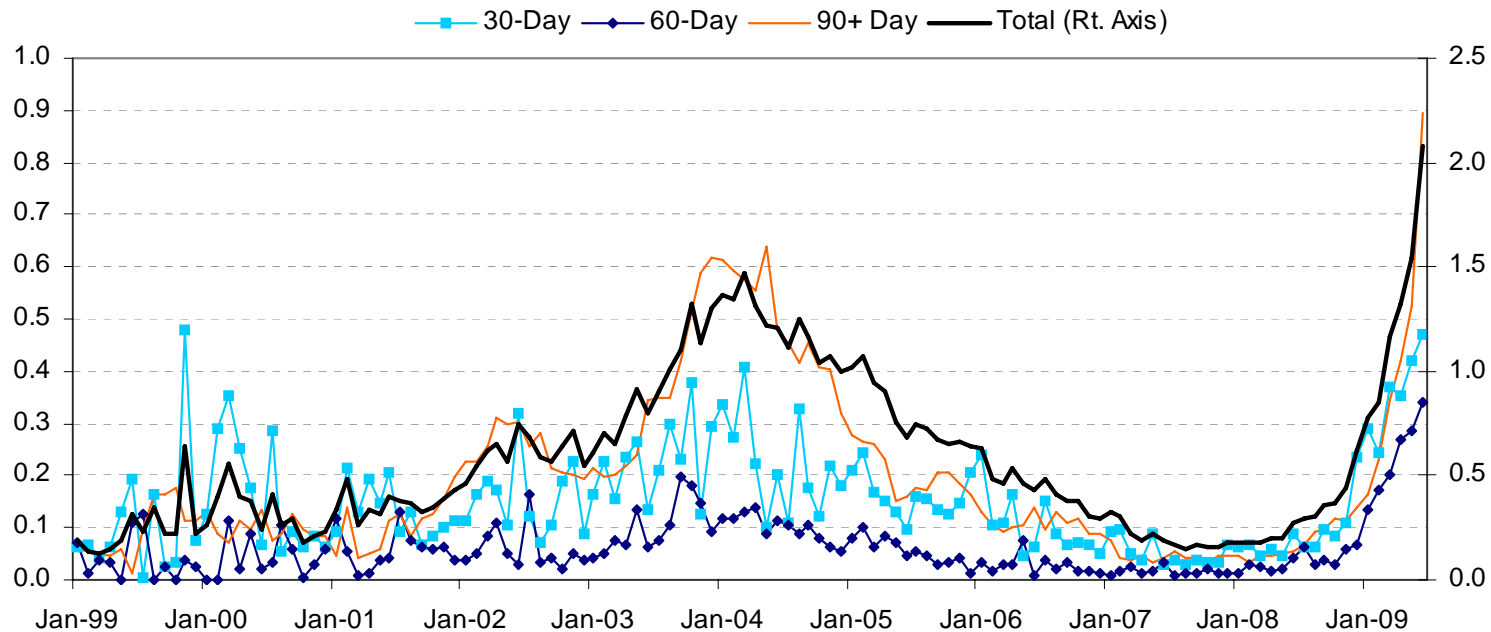
Deterioration picks up once again in multifamily



Source: Intex, Trepp

- Current total delinquency rate of 5.44% far surpasses previous peak of 2.35% in October 2005
- After being essentially flat in May, the delinquency rate began to accelerate again June (26bp)
- Short term delinquency rates continue to trend upwards

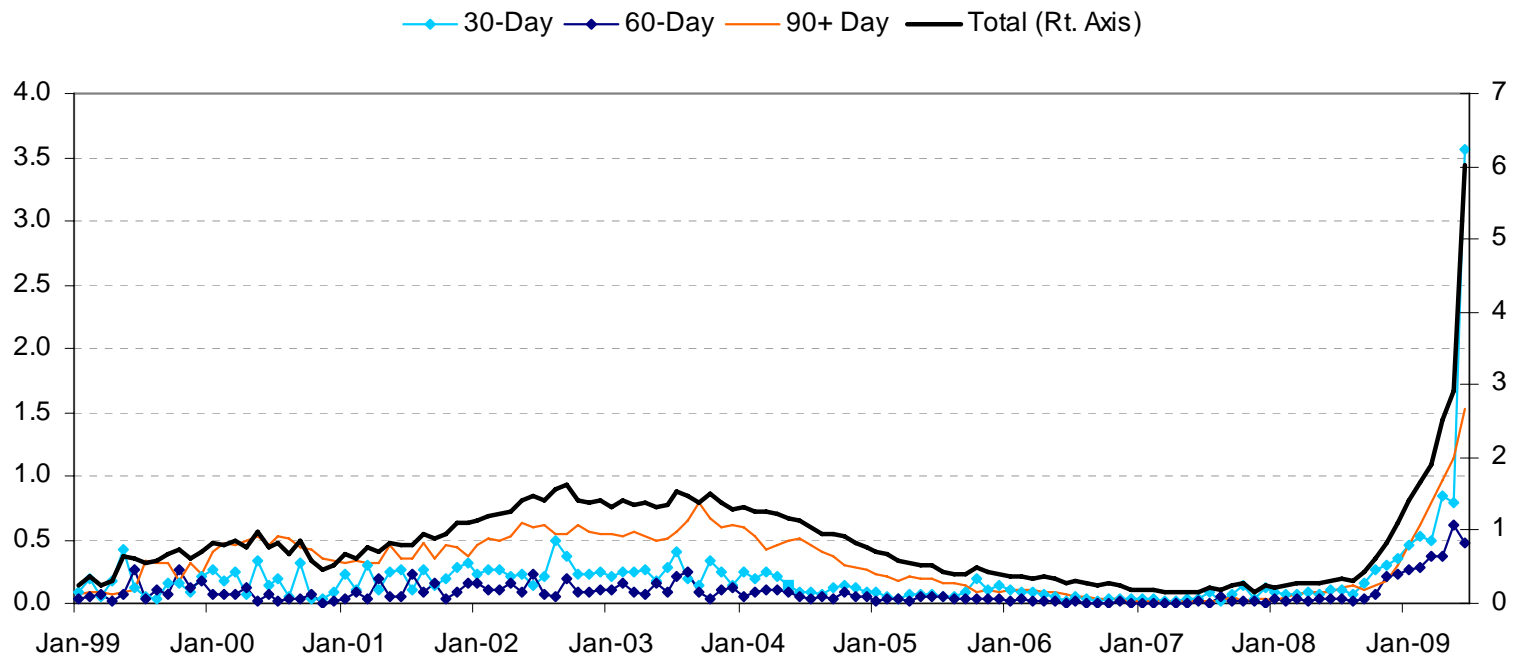
Office delinquency rates remain relatively low, but the degree of deterioration is accelerating sharply



Source: Intex, Trepp

- Given the deterioration in employment rates in general, and office employment rates in particular, we expect office to be one of the hardest hit property segments
- Average monthly increase in delinquency rate over past four months of 30bp; 53bp increase in June

Degree of deterioration in retail is simply stunning



Source: Intex, Trepp

- Retail total delinquency rate, at 6.0%, rose 310bp in June, mainly due to GGP
- Even without GGP, retail delinquency are well in excess of 3%

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

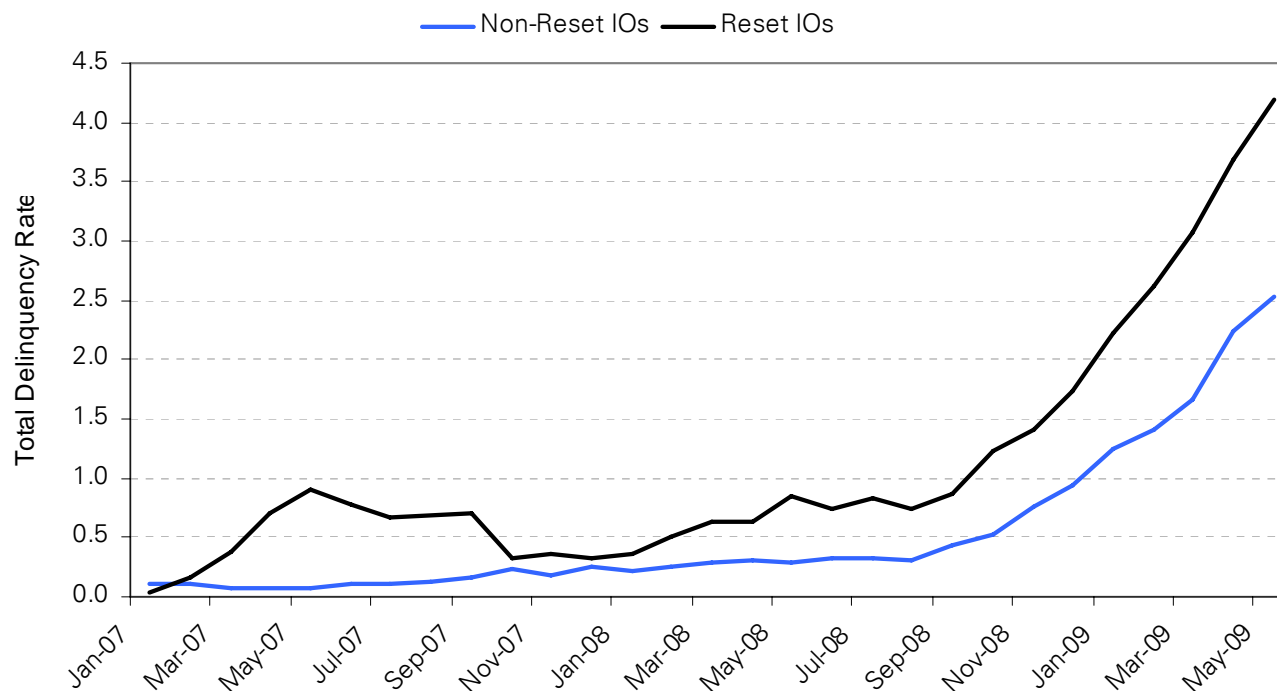
- Non-stabilized pro forma loans
- Resetting partial IO loans

\$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%

- Most of these are now highly unlikely to stabilize, and are probably also exhibiting a significant degrees of negative equity
- We expect that 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
- Number of partial IOs resetting each month remains high through mid 2012
- Average increase in debt service of 20-25%

The Hard Place...

- Massive maturity default risk

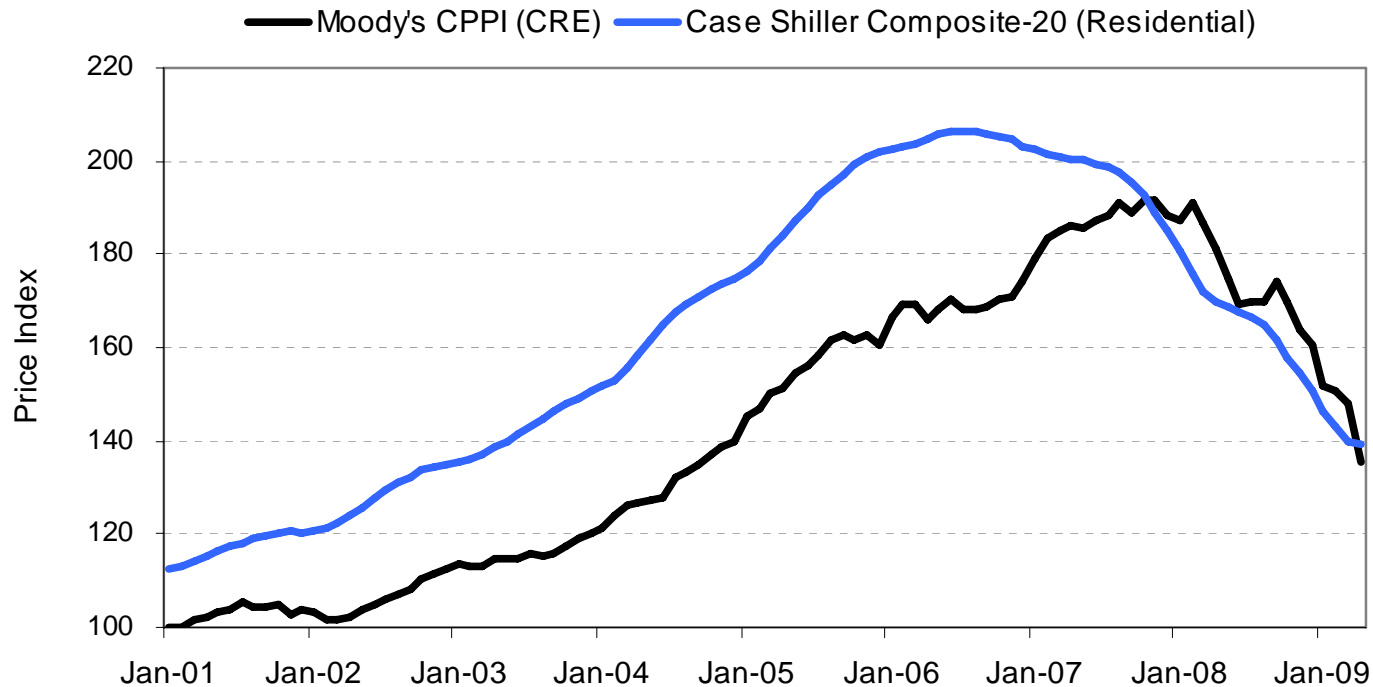
- We expect that 64.4-72.5% of loans (400-\$450 billion) would not qualify to refinance were they to survive until maturity

- With well over \$2 trillion in commercial mortgages maturing between now and 2013 in CMBS, banks and life company portfolios, the scale of the potential problem is formidable

- 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

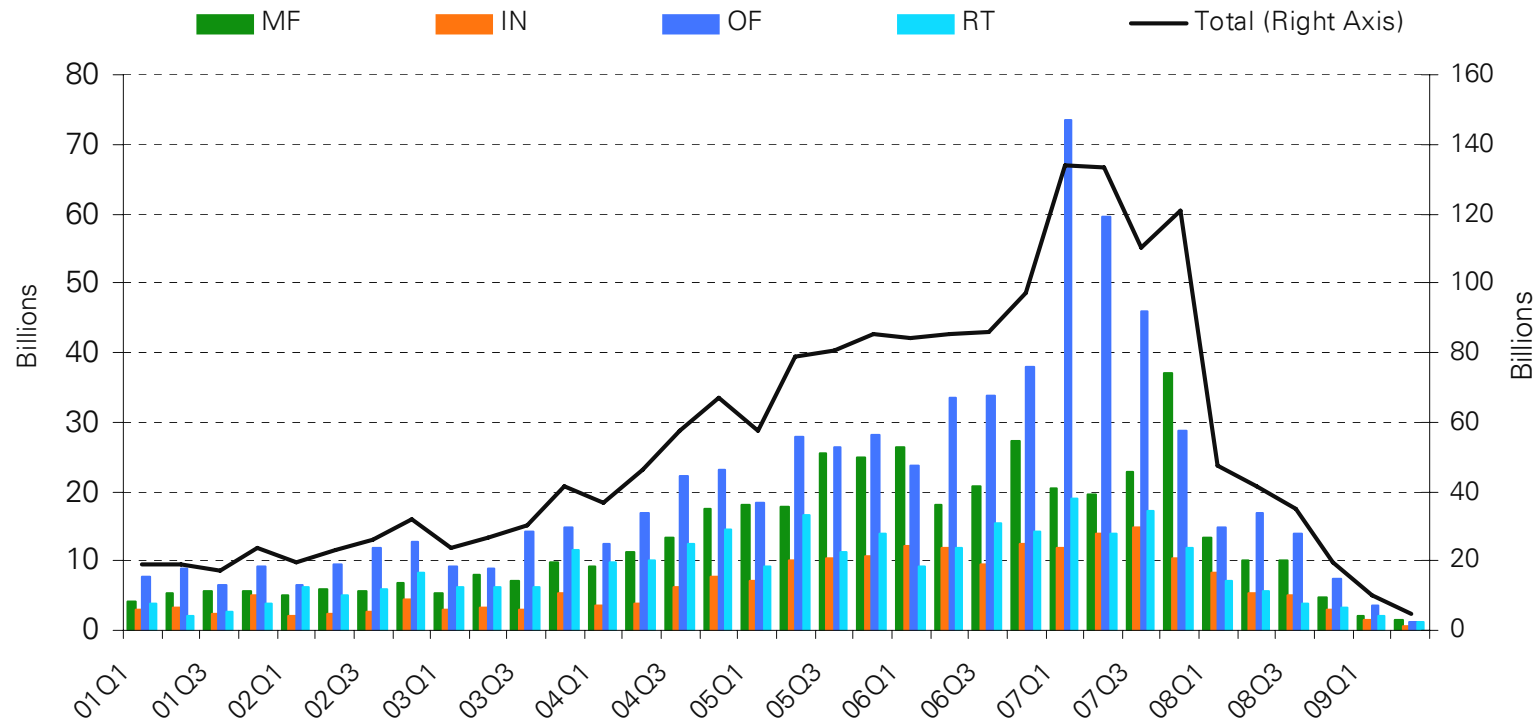
Commercial real estate price declines accelerating



Source: Moody's and REAL and Case Shiller

- Moody's CPPI CRE price index was down 7.5% in May, after an 8.6% decline in April
- The index is now off 35% from its peak in October 2007
- The index is likely to reflect a much higher percentage of distressed sales going forward

Transaction volume down in excess of 95% from the peak



Source: Real Capital Analytics

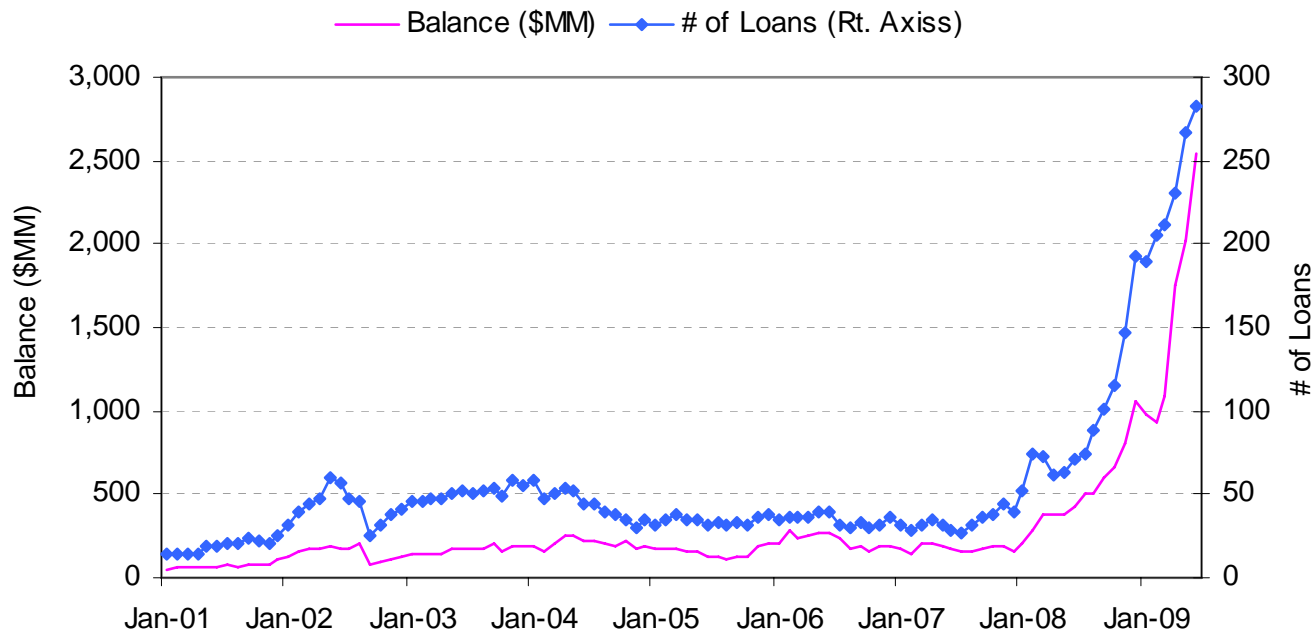
- Transaction volume is down from a peak of \$133.2 billion in Q2 2007 to \$4.8 billion in Q2 2009

Required ROE for levered CRE investors suggests price declines of 45% or more

	2007 Underwriting	New Underwriting	New Underwriting 15% NOI Decline
Cap Rate (going-in)	4.8%	7.4%	8.6%
Purchase Price (\$MM)	105	68	58
Loan to Value	85%	66%	60%
Equity (\$MM)	16	23	23
Loan Amount (\$MM)	89	45	35
Amortization	10	30 yr	30 yr
10 year UST	4.69%	2.86%	2.86%
Swap Spread	50	25	25
Credit Spread	45	500	500
All-In Rate	5.64%	8.11%	8.11%
Yr 1 Interest Cost (\$MM)	5.05	3.61	2.82
Yr 1 DSCR	1.00 x	1.25 x	1.36 x
Yr 10 NOI (\$MM)	6.5	6.5	5.5
Cap Rate (exit)	4.8%	7.4%	8.6%
Yr 10 Value	137	89	64
ROE	13.8%	12.8%	13.0%
Implied Price Decline		35%	45%

Source: Deutsche Bank Securities

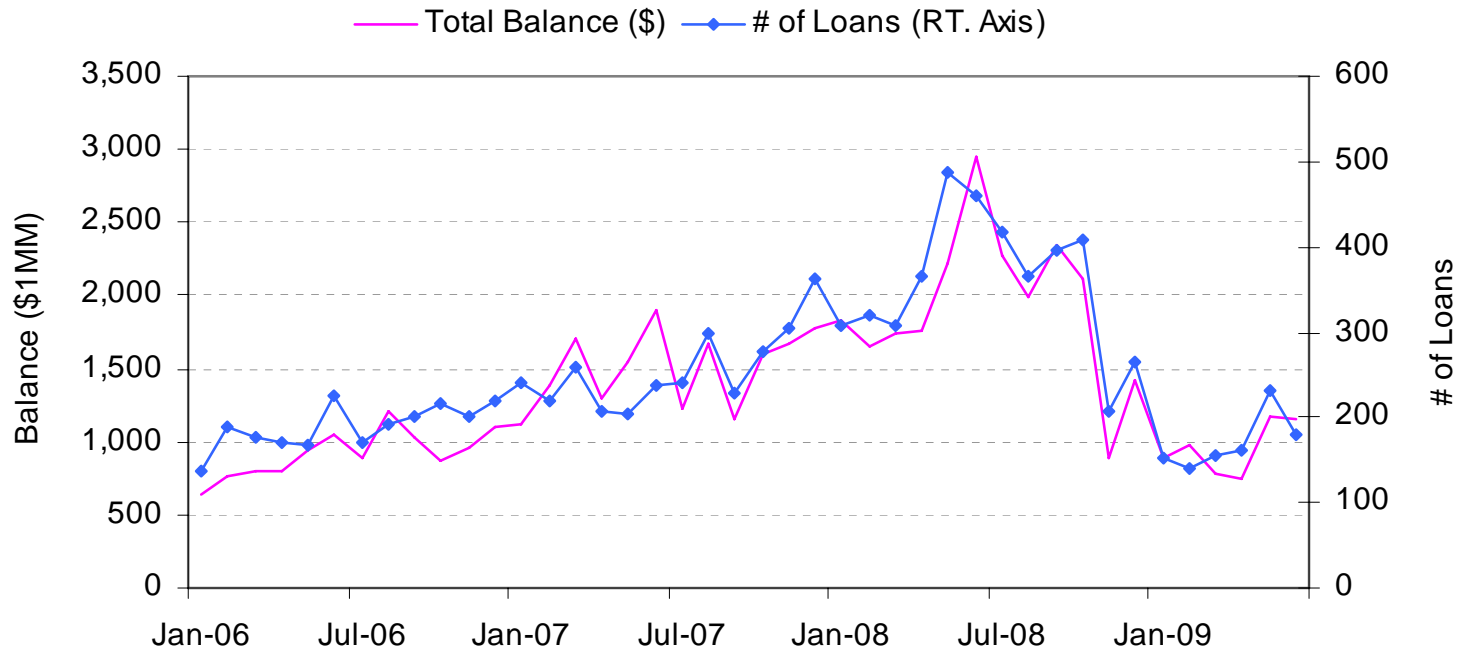
The number of fixed rate loans unable to refinance at maturity continues to grow rapidly



Source: Deutsche Bank, Intex

- Of the 282 loans (\$2.55 billion) that have matured but not paid off to date, 180 (\$1.67 billion) are delinquent

Nevertheless, there continues to be some degree of financing available for smaller loans



Source: Deutsche Bank, Intex

- Regional banks main source of financing
- Financing only available for small to moderate sized loans

Maturity default/extension details: All loans

Maturity Month	# of Loans Outstanding			% of Loans Outstanding (Relative to 3 Mnths Prior)				
	At Origination	6 Mnths Prior	3 Mnths Prior	At Maturity	1 Mnth After	2 Mnth After	3 Mnth After	6 Mnth After
Jan-07	356	95	56	16	5	5	5	4
Feb-07	203	61	41	29	20	15	12	0
Mar-07	203	69	41	20	15	10	0	0
Apr-07	271	82	64	6	3	3	3	2
May-07	251	68	43	16	9	5	5	2
Jun-07	314	76	55	24	9	9	7	4
Jul-07	345	122	79	18	13	8	5	1
Aug-07	367	150	84	21	15	11	8	2
Sep-07	402	125	89	17	10	3	3	2
Oct-07	501	161	122	20	16	11	9	4
Nov-07	644	181	132	15	5	4	4	1
Dec-07	681	205	147	27	14	10	7	3
Jan-08	1009	332	253	19	14	6	5	1
Feb-08	631	218	173	24	16	6	5	4
Mar-08	655	227	194	24	8	6	6	2
Apr-08	794	265	214	17	8	6	5	3
May-08	864	247	202	21	9	4	3	2
Jun-08	855	344	281	21	10	7	4	2
Jul-08	906	413	339	16	9	7	5	4
Aug-08	779	358	285	20	11	8	5	4
Sep-08	834	407	332	17	11	8	8	6
Oct-08	978	462	340	24	15	13	9	6
Nov-08	794	380	306	28	19	16	14	10
Dec-08	431	185	149	27	16	11	10	8
Jan-09	547	246	217	23	18	13	10	
Feb-09	313	146	123	31	24	19	15	
Mar-09	296	151	125	40	32	27	25	
Apr-09	390	195	161	53	38	27		
May-09	444	231	191	39	25			
Jun-09	513	248	228	36				

Source: Deutsche Bank, Intex

Maturity default/extension details: Loans \geq \$35MM

Maturity Month	# of Loans Outstanding			% of Loans Outstanding (Relative to 3 Mnths Prior)				
	At Origination	6 Mnths Prior	3 Mnths Prior	At Maturity	1 Mnth After	2 Mnth After	3 Mnth After	6 Mnth After
Jan-07	2	0	0	0	0	0	0	0
Feb-07	2	1	1	0	0	0	0	0
Mar-07	4	0	0	0	0	0	0	0
Apr-07	1	0	0	0	0	0	0	0
May-07	1	0	0	0	0	0	0	0
Jun-07	4	1	0	0	0	0	0	0
Jul-07	2	0	0	0	0	0	0	0
Sep-07	7	4	3	0	0	0	0	0
Oct-07	12	0	0	0	0	0	0	0
Nov-07	11	2	2	0	0	0	0	0
Dec-07	10	0	0	0	0	0	0	0
Jan-08	29	7	7	0	0	0	0	0
Feb-08	9	2	2	50	50	50	50	50
Mar-08	10	5	5	0	0	0	0	0
Apr-08	12	1	2	50	0	0	0	0
May-08	14	2	2	0	0	0	0	0
Jun-08	16	4	4	25	25	0	0	0
Jul-08	22	7	6	0	0	0	0	0
Aug-08	15	7	7	0	0	0	0	0
Sep-08	19	7	4	0	0	0	0	0
Oct-08	20	9	7	14	14	14	0	0
Nov-08	19	7	7	14	14	14	0	0
Dec-08	8	3	2	0	0	0	0	0
Jan-09	21	8	7	14	0	0	0	0
Feb-09	10	5	4	75	50	50	25	
Mar-09	11	7	7	100	86	71	71	
Apr-09	12	6	4	75	75	75		
May-09	9	4	3	100	100			
Jun-09	7	6	5	100				

Source: Deutsche Bank, Intex

Default and Loss Estimates

Term and maturity default related loss estimates: Severe Stress Scenario

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

Term and maturity default related loss estimates: Moderate Stress Scenario

Origination Vintage	Projected Term			Projected Maturity			Existing	Projected Total	
	Default (%)*	Loss (%)*	Severity (%)*	Default (%)*	Loss (%)*	Severity (%)*	Loss (%)*	Default (%)*	Loss (%)*
2000	2.7	1.4	52.9	3.3	0.8	24.7	1.6	6.0	3.8
2001	3.4	1.5	44.7	5.6	1.2	21.2	1.1	9.0	3.8
2002	3.6	1.6	45.2	5.7	1.0	18.2	0.5	9.3	3.2
2003	3.2	1.5	48.9	7.5	1.1	14.2	0.2	10.6	2.8
2004	4.1	1.9	46.4	12.5	1.8	14.5	0.1	16.6	3.8
2005	5.6	2.8	49.7	24.6	4.0	16.3	0.1	30.2	6.8
2006	8.3	4.3	52.3	27.9	4.9	17.4	0.0	36.2	9.2
2007	15.0	8.4	56.3	40.3	8.7	21.7	0.0	55.3	17.2
2008	11.4	5.4	47.1	23.2	4.8	20.8	0.0	34.5	10.2
2000-2008	8.1	4.3	53.1	24.2	4.6	19.0	0.2	32.3	9.1
2005-2008	10.2	5.5	54.0	31.6	6.1	19.3	0.0	41.8	11.6

* Percent calculated with respect to original balance

Source: Deutsche Bank, Intex

Appendix 1

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