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The Deflating Mortgage and Housing Bubble; Part II

AEI-PRIMA
October 11, 2007

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" Virtuous" Mortgage / Housing Cycle Drove HPA

Home Sales Rise

Buyers Can Now Afford Homes

New "Affordability" Products Created (High HPA hides credit risk)

Buyers Priced Out of Market + Delinquencies Fall

Home Prices Rise

Why Such a Large Market Share For Subprime & Alt-A?

RMBS Issuance—By Type ($million) and %

Date	Agency	Alt-A	Prime Jumbo	Subprime	Seconds	S&D	Re-MBS	Other	Total MBS	% of Total: Agency	Alt-A	Jumbo	Subprime	Non-Agency
1995	269,132	498	25,838	17,772	2,012	2,068	739		318,058	84.6	0.2	8.1	5.6	15.4
1996	370,648	1,803	31,419	30,769	5,141	0	762		440,541	84.1	0.4	7.1	7.0	15.9
1997	367,884	6,518	49,975	56,921	4,570	924	224		487,016	75.5	1.3	10.3	11.7	24.5
1998	725,952	21,236	97,365	75,830	7,375	790	616		929,163	78.1	2.3	10.5	8.2	21.9
1999	685,078	12,023	74,631	55,852	3,266	1,374	754		832,977	82.2	1.4	9.0	6.7	17.8
2000	479,011	16,444	53,585	52,467	10,106	2,374	983		614,970	77.9	2.7	8.7	8.5	22.1
2001	1,087,499	11,374	142,203	87,053	15,512	5,522	4,736	921	1,354,819	80.3	0.8	10.5	6.4	19.7
2002	1,444,426	53,463	171,534	122,681	24,803	25,172	14,357	1,945	1,858,381	77.7	2.9	9.2	6.6	22.3
2003	2,131,953	74,151	237,455	194,959	20,351	47,033	7,748	4,520	2,718,170	78.4	2.7	8.7	7.2	21.6
2004	1,018,684	158,586	233,378	362,549	49,123	34,701	21,383	4,432	1,882,836	54.1	8.4	12.4	19.3	45.9
2005	964,697	332,323	280,704	465,017	60,736	28,227	16,786	7,499	2,155,987	44.7	15.4	13.0	21.6	55.3
2006	924,872	365,676	219,037	448,600	74,241	16,236	13,464	8,199	2,070,324	44.7	17.7	10.6	21.7	55.3
YTD-2007	551,951	197,779	120,897	162,586	28,930	8,844	3,333	4,185	1,078,503	51.2	18.3	11.2	15.1	48.8
2007-Q1	265,208	96,873	60,333	88,554	18,299	3,500	2,731	1,618	537,116	49.4	18.0	11.2	16.5	50.6
2007-Q2	286,743	100,906	60,564	74,031	10,631	5,343	602	2,566	541,387	53.0	18.6	11.2	13.7	47.0

Source: Inside MBS & ABS, based on SEC filingss and industry surveys.

Note: MBS are backed by 1-4 family mortgage loans. Agency CMO/REMICs are backed by FNMA, FHLMC or GNMA collateral. Starting January 2001, Non-Agency MBS include private-label jumbo and Alt-A transactions, plus mortgage-related ABS, including subprime HEL, second liens, HELOCs, high LTV loans and manufactured housing loans. ABS data prior to 2001 include some mortgage-related collateral.

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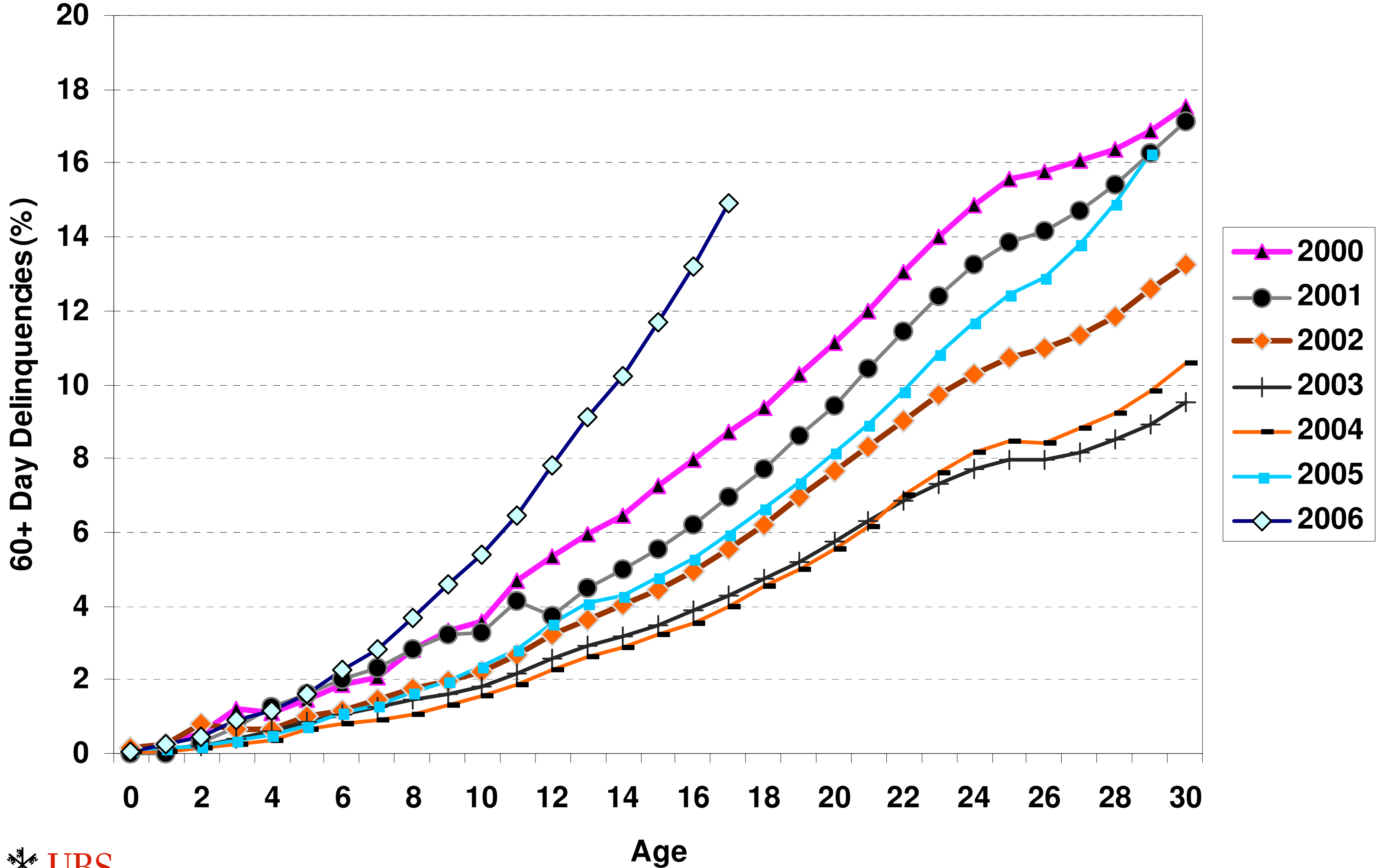
Sharp Deterioration in Collateral Characteristics

Program	Orig Yr	Orig Amt ($ mm)	Loan Size (000s)	DTI	LTV	%LTV>80	CLTV	FICO	%FICO<600	WAC	%Purchase	%Investor	%LowDoc	%Silent 2nds	%IO	%40Yr
Prime ARMs	2002	59,905	503	31	66	2.08	66	734	1.31	5.71	27.45	0.51	42.49	0.92	40.63	0.09
Prime ARMs	2003	89,931	482	31	67	2.33	68	734	1.04	4.87	33.77	1.31	37.82	11.21	41.30	0.03
Prime ARMs	2004	102,045	443	33	70	2.45	73	735	2.24	4.82	53.42	1.71	41.35	23.43	64.81	0.03
Prime ARMs	2005	83,997	501	35	71	1.72	74	739	1.20	5.52	56.13	1.99	49.87	27.07	83.31	0.01
Prime ARMs	2006	44,915	613	37	71	1.11	75	737	0.30	6.24	48.40	1.94	62.72	31.72	91.40	0.18
Alt-A ARMs	2002	10,755	335	34	72	12.91	73	711	1.13	6.47	44.62	10.20	53.56	4.85	27.25	0.00
Alt-A ARMs	2003	29,991	298	35	75	11.88	78	709	1.21	5.62	50.34	13.19	58.81	24.46	55.25	0.00
Alt-A ARMs	2004	109,683	270	36	76	10.50	83	708	0.52	5.59	60.90	15.22	58.97	39.04	74.16	0.00
Alt-A ARMs	2005	134,599	293	37	76	6.71	84	713	0.92	6.15	64.23	15.38	66.14	48.01	83.42	0.07
Alt-A ARMs	2006	142,264	351	38	76	4.64	85	711	0.30	6.66	58.86	13.72	76.33	54.32	83.66	1.87
Subprime ARMs	2002	79,045	152	40	81	43.72	81	605	47.92	8.44	32.90	4.90	31.81	3.74	1.33	0.01
Subprime ARMs	2003	134,410	171	40	82	46.68	84	613	42.06	7.46	34.85	5.00	36.23	10.85	5.92	0.00
Subprime ARMs	2004	264,260	187	41	82	43.20	85	619	38.23	7.05	40.36	5.35	39.90	19.88	21.10	0.00
Subprime ARMs	2005	358,521	208	41	81	36.59	87	626	32.85	7.32	45.62	5.42	44.93	28.82	32.44	7.96
Subprime ARMs	2006	287,388	223	42	81	36.54	88	623	32.59	8.26	46.09	5.33	47.15	33.69	20.08	36.67
Option ARM	2002	3,708	494	29	69	1.75	69	720	0.06	3.55	37.26	2.36	67.65	0.52	0.00	1.39
Option ARM	2003	3,035	309	30	71	5.43	71	702	3.63	2.02	30.21	10.60	69.84	6.60	0.03	5.36
Option ARM	2004	51,109	377	32	72	2.94	73	706	2.41	1.40	37.65	7.12	74.09	12.08	0.00	3.64
Option ARM	2005	132,407	388	35	74	5.03	77	710	2.60	1.34	37.96	12.98	80.53	25.24	0.12	9.06
Option ARM	2006	137,165	391	35	75	7.67	79	709	0.20	1.95	28.07	11.39	88.12	32.41	0.52	30.38

Source: Loan Performance, CPRCDR, UBS

Subprime 2006: The Worst Ever!

2006 Delinq= 2 x Historical Norm



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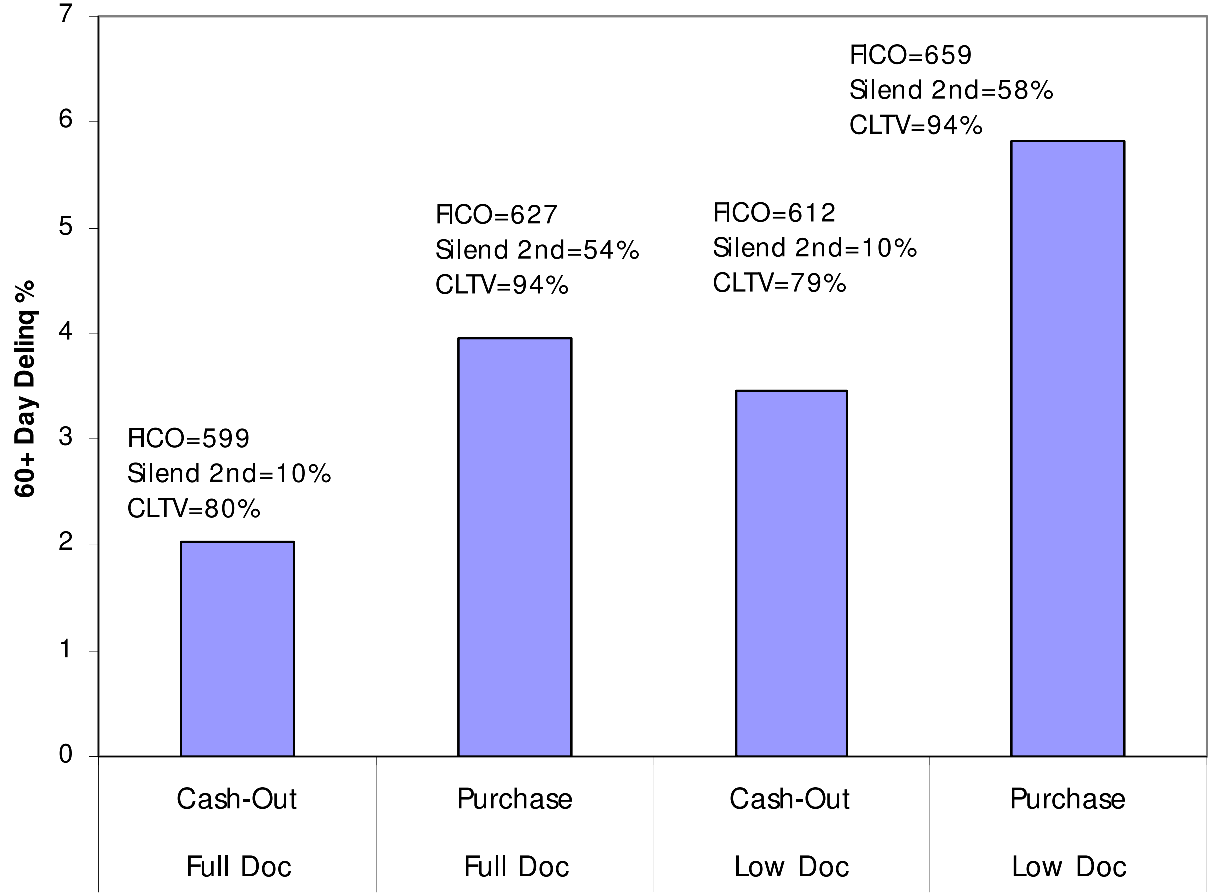
The Unbearable Weight of Risk Layering

2006 Purchase Loans Are Twice As Likely to Default as Cash-outs, Controlling for Documentation



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Source: Loan Performance, UBS.

2006 Is Still a Conundrum

- Subprime loans from 2006 are performing far worse than those from 2005, even after adjusting for FICO/LTV/DOC TYPE and HPA.

- Two possibilities:
  1) Main borrower/loan characteristics used to forecast defaults have been hopelessly compromised. FICO, LTV, stated income, etc. have been corrupted, either by borrowers who committed fraud, or by a general corruption of the underwriting process.

  2) Lenders loosened underwriting of secondary criteria that is not reported to rating agencies or appear on collateral tapes. This might include such variable as time on job, length of time in residence, time since last bankruptcy, etc.

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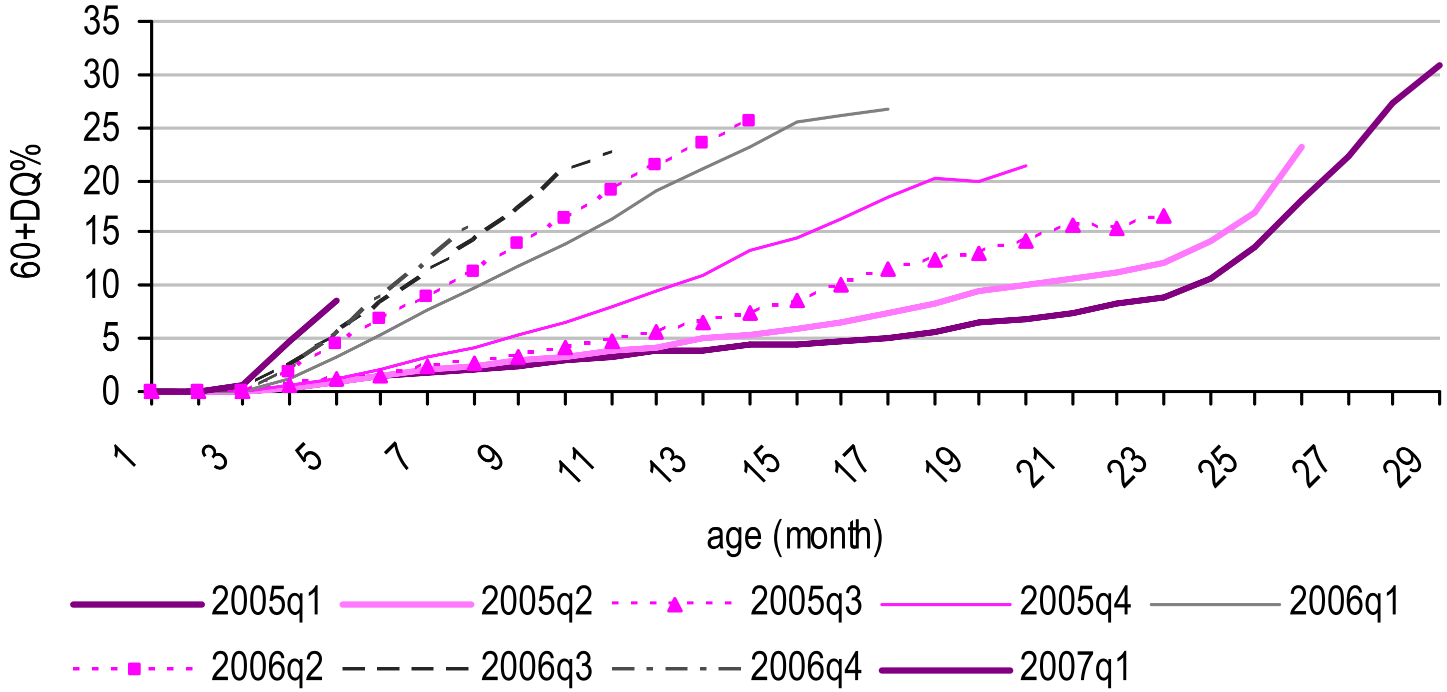
60+DQ% of 2/28 ARM

(CA, 1st Lien, Purchase, Low Doc, CLTV>=100, 625<=FICO<650)



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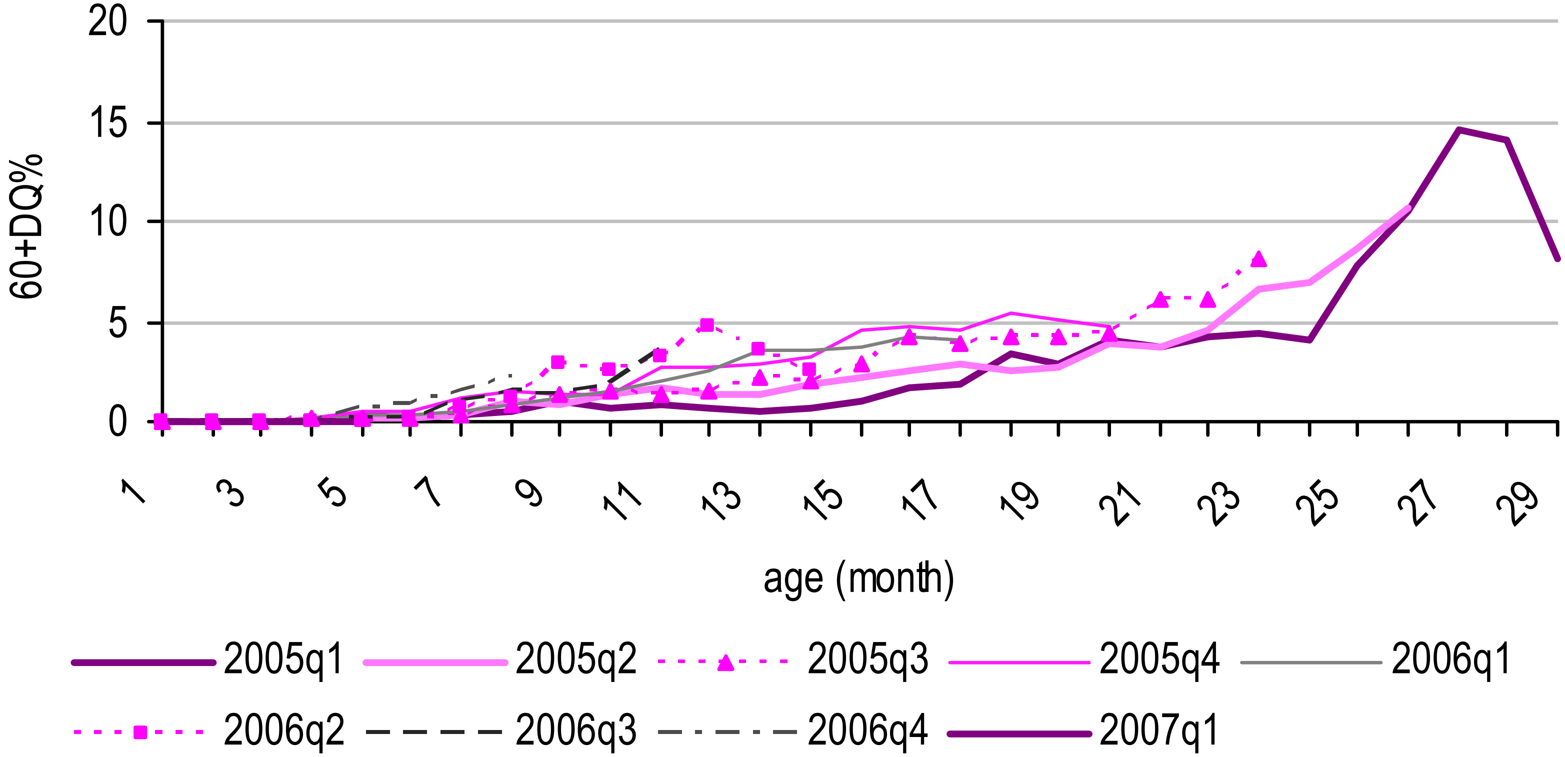
60+DQ% of 2/28 ARM

(CA, 1st Lien, Cashout, Full Doc, CLTV<80, 600<=FICO<625)



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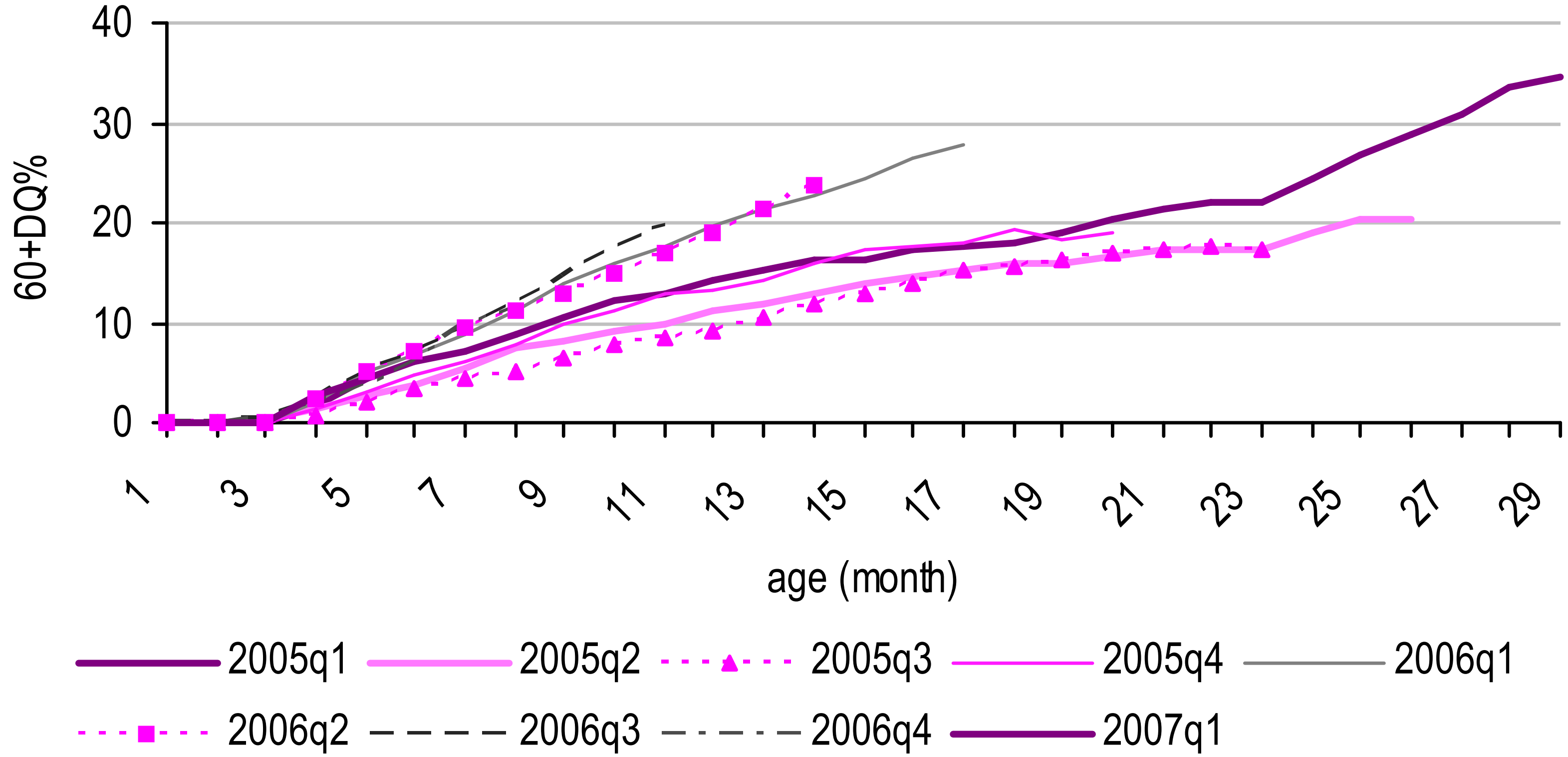
60+DQ% of 2/28 ARM

(Stable HPA states, 1st Lien, Purchase, Low Doc, CLTV>=100, FICO>=650)



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Bank Regulations – The Saga of the Subprime 2/28

Dec 2005 – Proposed guidelines – “fully indexed, fully amortized”

Sept 2006 – Guidance for Non-Traditional Mortgage Products

- Aimed at Interest Only (IO) and Option (NegAm) ARMs
- Carve-out for “Traditional hybrid ARMs

Jan- April 2007 – Congress pummels bank regulators

June 2007 – Guidance for Subprime Mortgage Products

July 2007 – Subprime Market Shuts Down

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Most of U.S. Subprime Market Shut Down

Subprime Originations ($mm)

Rank	Lender	2006 Volume	Mkt Share	Notes
1	HSBC Finance, IL	$52,800	8.30%	Shutting down its mortgage services office in Indiana, eliminating 600 jobs (Aug 2007)
2	New Century Financial, CA	$51,600	8.10%	Filed for Chapter 11 bankruptcy (Apr 2007)
3	Countrywide Financial, CA	$40,596	6.30%	Cut 900 jobs, plans to cut as much as 20% (10-12k) of its workforce in the next 3 months (Sep 2007)
4	CitiMortgage, NY	$38,040	5.90%	Announced to lay off of 557 employees in FL offices (May 2007)
5	WMC mortgage, CA	$33,157	5.20%	GE announced its plans to sell its WMC mortgage unit; WMC has reduced its staff from 1,200 to ~700 over the past year (Jul 2007)
6	Fremont Investment & Loan, CA	$32,300	5.00%	Ceased subprime lending (Mar 2007); Ellington announced plans to buy Fremont's real estate business (Apr 2007)
7	Ameriquest mortgage, CA	$29,500	4.60%	ACC Capital Holdings, owner of Ameriquest; shut retail branches (may 2007)
8	Option One mortgage, CA	$28,792	4.50%	Owned by H&R Block; Sale to Cerberus may fall apart (Sep 2007)
9	Wells Fargo Home mortgage, IA*	$27,869	4.40%	Shut subprime wholesale lending unit (Jul 2007); announced to cut back on Alt-A originations (Aug 2007)
10	First Franklin Financial Corp, CA	$27,666	4.30%	Sold to Merrill Lynch (Sep 2006); Merrill announced plans to cut an unspecified # of jobs at First Franklin (Sep 2007)
11	Washington Mutual, WA	$26,600	4.20%	Tightened underwriting standards and eliminated 2/28s (Jul 2007)
12	Residential Funding Corp., MN	$21,200	3.30%	GMAC-RFC Holding Corp is parent company
13	Aegis mortgage Corp., TX	$17,000	2.70%	Filed for Chapter 11 bankruptcy (Aug 2007)
14	American General Finance, IN	$15,070	2.40%	Wholly-owned indirectly by AIG
15	Accredited Home Lenders, CA	$15,767	2.50%	Halted mortgage applications and ~1,600 employees will be laid off; Rejected Lone Star's revised buyout offer (Aug 2007)
16	BNC mortgage, CA	$14,500	2.30%	Subsidiary of Lehman; Shut down-- eliminating 1,200 employees (Aug 2007)
17	Chase Home Finance, NJ	$11,550	1.80%	Tightened underwriting standards and eliminated 2/28s (Jul 2007)
18	Equifirst, NC	$10,750	1.70%	Sold to Barclays (Jan 2007)
19	NovaStar Financial, KS	$10,233	1.60%	Closed its WarehouseUSA unit (Apr 2007); seeking "strategic alternatives"; receives $1.9bb credit line from Wachovia (May 2007)
20	Ownit mortgage Solutions, CA	$9,500	1.50%	Shut down (Dec 2006)
21	Resmae mortgage Corp., CA	$7,659	1.20%	Exits Chapter 11 bankruptcy protection; wholly-owned by RMC Mortgage Holdings, an affiliate of Citadel (Jun 2007)
22	Mortgage Lenders Network USA, CT	$6,000	0.90%	Filed for Chapter 11 bankruptcy (Feb 2007)
23	ECC Capital Corp., CA	$5,485	0.90%	Sold to Bear Stearns (Oct 2006)
24	Fieldstone Mortgage Company, MD	$4,991	0.80%	Sold to C-Bass; Wholesale operations closed after liquidity problems at C-Bass (Aug
25	Nationstar Mortgage (Centex), TX	$4,619	0.70%	Sold to Fortress (Mar 2006)
	Total for Top 25 Lenders:	$543,243	84.90%	
	Total B&C Originations:	$640,000	100.00%	

UBS *** Wells Fargo subprime originations were restated to exclude co-issuance volume.**

Source: Inside B&C Lending, Copyright 2007

“ Vicious” Mortgage / Housing Cycle

Home Prices Fall

Defaults Increase

Lenders Tighten Standards

Buyers Priced Out of Market

Home Sales Fall

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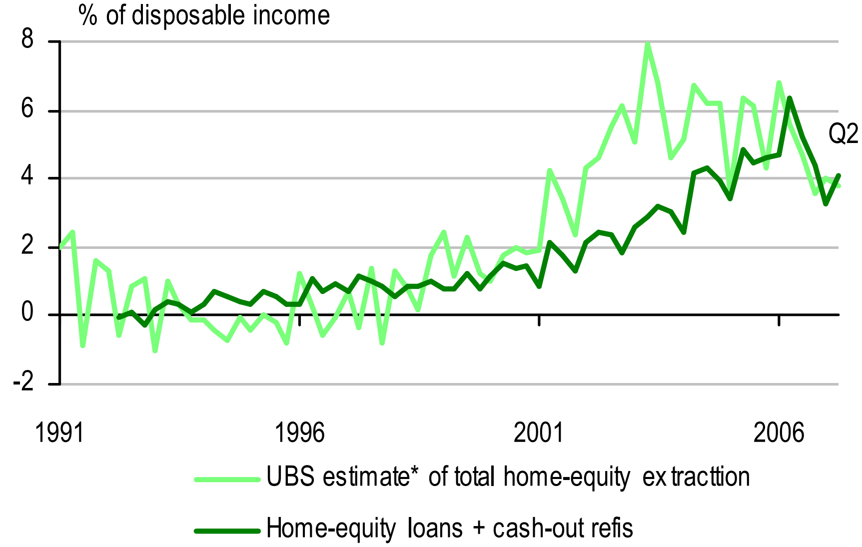
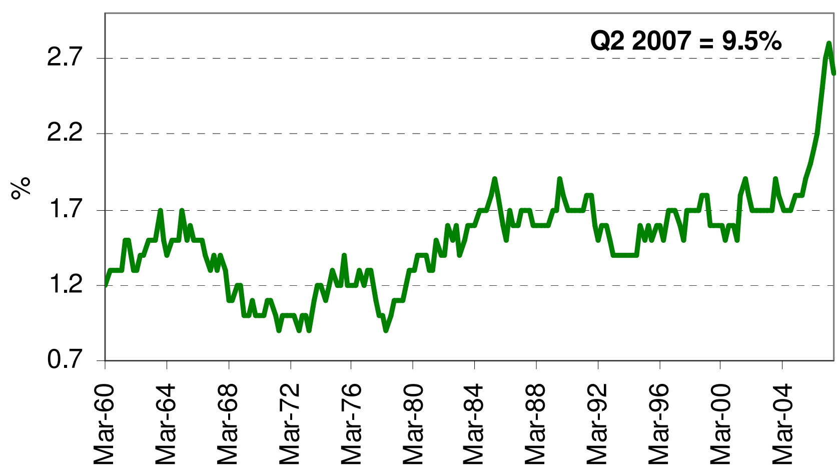
Other Negative Indicators for Housing

Total Home Equity Extraction Has Been Declining



% of Non-Rental Home Vacant and For Sale



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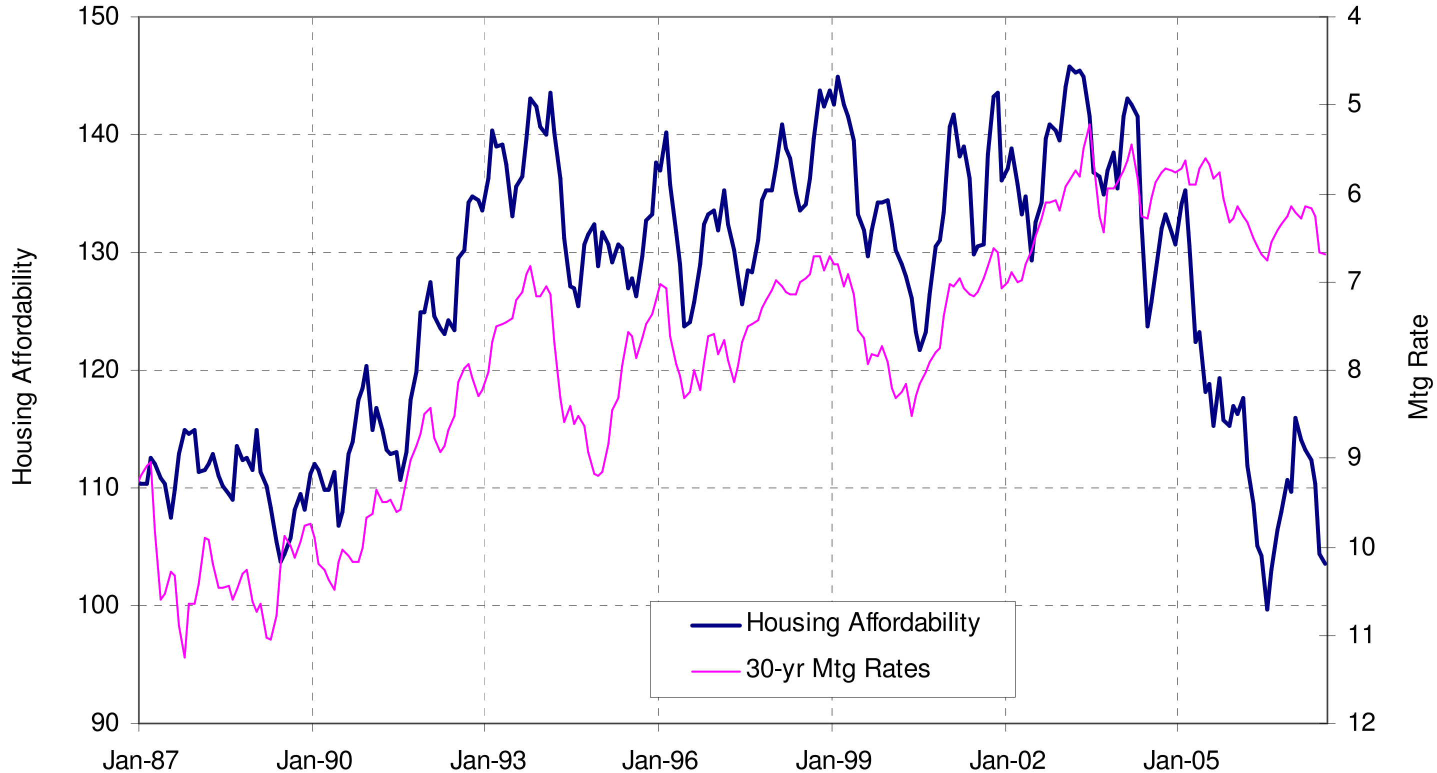
Housing Affordability Lowest in 15 Years



Source: National Association of Realtors, Freddie Mac

Latest is estimated: Jul 2007: Housing Affordability = 103.6; 30-yr no-point Mtg Rate = 6.70

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HPA and Rate Changes Needed to Restore Affordability

	Median Home Price	Mortgage Rate	Median Family Income	Monthly P&I	Affordability
2007 07	228,600	6.80	59,292	1,192.24	103.6
-10%HPA	205,740	6.80	59,292	1,073.02	115.1
-20%HPA	182,880	6.80	59,292	953.79	129.5
-30%HPA	160,020	6.80	59,292	834.57	148.0
-100 bps	228,600	5.80	59,292	1,073.05	115.1
-200 bps	228,600	4.80	59,292	959.51	128.7
-300 bps	228,600	3.80	59,292	852.14	145.0
-10 HPA/ -100 bps	205,740	5.80	59,292	965.75	127.9

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Amount of Non-Agency MBS Resetting (in $ Billions)

Product Type	Curr Outstanding	Outstanding Adj x 1.2	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08
1 yr Hybrid	0.20	0.24	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	-	-	-	-	-	-
2 yr Hybrid	304.13	364.96	12.59	12.91	11.99	13.14	14.65	12.47	13.15	17.58	15.30	16.49	18.34	16.84	18.76	15.85	16.03	13.30
3 yr Hybrid	60.89	73.07	1.20	1.28	1.40	1.48	1.56	1.12	1.35	1.80	1.83	1.74	1.91	2.05	2.39	2.37	2.30	2.22
5 yr Hybrid	10.07	12.08	0.01	0.02	0.03	0.02	0.03	0.03	0.03	0.04	0.04	0.05	0.04	0.04	0.06	0.07	0.06	0.05
7 yr Hybrid	0.11	0.14	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-	0.00
10 yr Hybrid	0.72	0.86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 yr IO Hybrid	0.15	0.18	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	-	-	-	-	-	-	-	-
2 yr IO Hybrid	98.78	118.53	8.52	8.33	6.74	5.58	4.54	3.16	3.49	4.57	3.98	4.41	4.63	3.94	4.27	3.71	3.89	3.24
3 yr IO Hybrid	23.67	28.40	0.51	0.72	0.44	0.66	0.73	0.58	0.78	1.25	1.45	1.31	1.63	1.63	1.96	1.62	1.31	1.00
5 yr IO Hybrid	8.36	10.04	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.02	0.02	0.03	0.04	0.02	0.03
7 yr IO Hybrid	0.17	0.21	-	-	-	-	-	-	-	-	-	-	-	-	0.00	-	-	-
Total without prepay assumption	507.26	608.71	22.85	23.28	20.63	20.91	21.52	17.38	18.82	25.25	22.61	24.01	26.57	24.52	27.48	23.65	23.62	19.84
Total with prepay assumption	507.26	608.71	22.02	22.01	19.15	19.05	19.25	15.25	16.21	21.36	18.78	19.57	21.26	19.25	21.18	17.89	17.54	14.46
Total # of loans resetting in 000's*			109	111	98	100	102	83	90	120	108	114	127	117	131	113	112	94

** based on average loan sizes for the last 3 years of 210,000*

Amount of Alt-A Resetting (in $ Billions)

Alt-A	Curr Outstanding	Outstanding Adj x 1.2	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08
Total without prepay assumption	493.17	591.80	2.60	2.82	3.09	2.65	2.41	2.01	2.16	2.88	2.19	2.32	2.26	2.24	2.17	1.95	1.80	1.70
Total with prepay assumption	493.17	591.80	2.54	2.71	2.92	2.47	2.22	1.83	1.93	2.55	1.91	2.00	1.92	1.88	1.79	1.59	1.45	1.35
Total # of loans resetting in 000's*			8	8	9	8	7	6	6	8	6	7	7	6	6	6	5	5

** based on average loan sizes for the last 3 years of 345,000*

Amount of Jumbo/Prime Resetting (in $ Billions)

Jumbo	Curr Outstanding Bal	Outstanding Adj x 1.2	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08
Total without prepay assumption	221.69	266.03	0.94	1.16	1.41	1.29	1.49	1.42	1.28	1.54	2.21	1.95	3.35	4.40	4.09	2.28	1.99	1.47
Total with prepay assumption	221.69	266.03	0.91	1.12	1.34	1.21	1.37	1.29	1.15	1.37	1.93	1.68	2.85	3.69	3.39	1.86	1.61	1.17
Total # of loans resetting in 000's*			2	2	3	3	3	3	3	3	5	4	7	9	8	5	4	3

** based on average loan sizes for the last 3 years of 485,000*

Total Amount of Non-Agency ARMs Resetting (in $ billions)

Total	Outstanding Bal	Outstanding Adj x 1.2	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08
Total without prepay assumption	1,222.12	1,466.54	26.39	27.26	25.13	24.85	25.42	20.81	22.25	29.67	27.01	28.28	32.18	31.16	33.74	27.88	27.41	23.01
Total with prepay assumption	1,222.12	1,466.54	25.47	25.84	23.42	22.73	22.84	18.37	19.30	25.27	22.62	23.25	26.03	24.82	26.36	21.34	17.54	14.46
Total # of loans resetting in 000's*			118	121	110	110	113	91	98	132	119	125	140	132	146	123	122	102

** based on average loan sizes for the last 3 years*

Source: Loan Performance, CPR CDR, UBS

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No "Bail-Out"(So Far)

- FHLMC & FNMA have announced broader use of subprime criteria that will allow more subprime borrowers to qualify for a FHLMC/FNMA loan. Could help 50% of current subprime borrowers.
- FHA has announced program that could help 240,000 subprime borrowers refinance into FHA loan.
- Bank regulators have released letter encouraging lenders & servicers to "modify" subprime loans whenever possible to help people stay in their homes.
- All of this will help the better subprime borrowers, not the one's most likely to default.
- Until a more comprehensive "bail-out" is put in place, expect losses to meet or exceed our current estimates.

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“New” Subprime/Alt-A market

- Will evolve over next year or two.
- Will be mainly fixed-rate or hybrid with long resets.
- No stated document if borrower is wage earner
- Borrower must have equity in home (i.e. no more 0% down).
- Subprime + Alt-A return to <= 10% of U.S. mortgage market after peaking at around 40%.
  - $850 Billion → $200 Billion

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