

Bank Stocks Headed Lower Until Asset Valuations “Get Real”



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Summary

For the financial markets to stabilize, we believe banks need to swiftly address true asset values and adjust their books accordingly. As assets have repeatedly been marked down over the past year in what seems like a constant game of “catch-up,” investors have grown understandably wary of valuations and accordingly have revalued bank stocks with significantly lower valuations.

Key Points

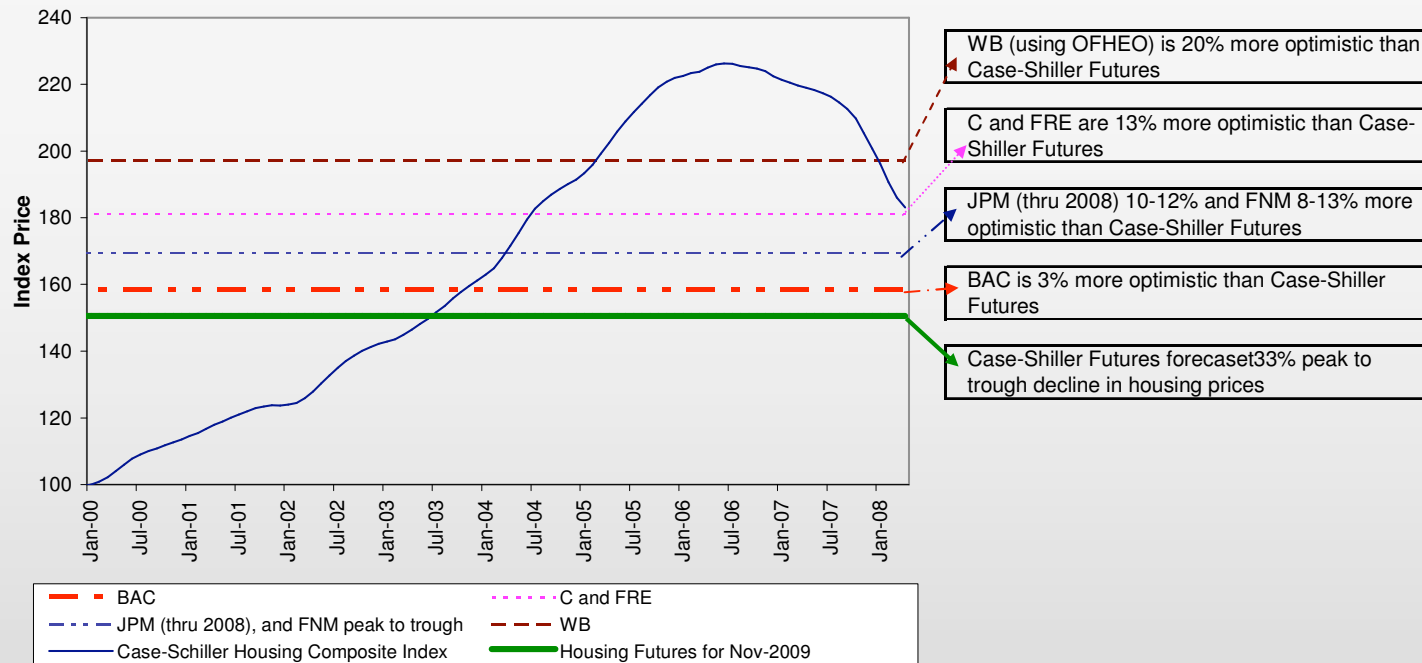
We believe that banks' carrying valuations on mortgage-related assets are still too high, but it varies in degree. While Case-Shiller is currently pricing 33% peak to trough house price declines, banks like Wachovia are using 12.9% (OFHEO index) assumptions. We note, even FRE and FNM no longer use OFHEO as a guidepost as it has been proven far more bogus than any other estimate. While banks like BAC and JPM (through 2008) are using 30% and 24% peak to trough declines, respectively, banks like C are using just 20% peak to trough assumptions. Note, Case-Shiller is already pricing over 15% declines from peak levels to date.

Within this report, we build on our prior themes, notably the issue of downward pressure on home prices driven by growing supply of housing inventory and dramatically diminishing demand created by a notable lack of available leverage. As we do not expect the "buyers' strike" for structured products which has lasted now for a year to end anytime soon, we do not expect this supply/demand phenomenon to change anytime soon.

Because the securitization market provided close to 85% of US mortgages for over the past decade, its absence means a commensurate absence of available funding. Since 70% of US homes are mortgaged, a shutdown in such a crucial part of the lending market has enormous consequences. Put simply, less demand and more supply translates directly into lower prices.

Because Housing Price Appreciation assumptions are the most important variable assumption in a mortgage asset valuation, the fact that all banks under our coverage have unrealistic HPA assumptions will in our opinion lead to a material and protracted writedown and capital pressure scenario for the banks well into 2009.

Bank Asset Valuations Show Dramatic Divide in Underlying HPA Assumptions



Sources: Chicago Mercantile Exchange, Company Reports, Oppenheimer & Co. Inc.

BAC: per discussions with management

C: 1Q08 Earnings Call on 4/18/08

FNM: 1Q08 Earnings Call on 5/6/08.

FRE: Conference Call on 5/20/08. 15% decline in FRE portfolio equals ~20% decline for Case-Shiller Index

JPM: 1Q08 Earnings Call on 4/16/08

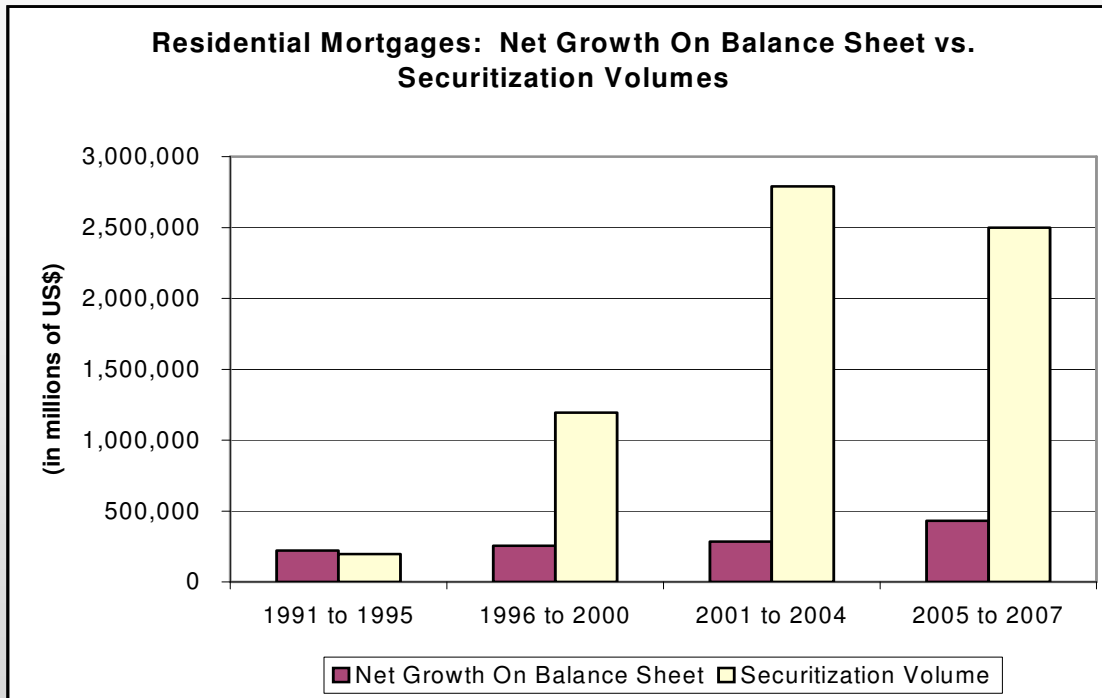
WB: 1Q08 Earnings Call on 4/14/08

WFC: No Forecast Provided, Conference call on 5/29/08

Expected Peak To Trough Declines	
Futures Market	-33%
BAC	-30%
C	-20%
FNM	-20-25%
FRE	-20%
JPM	~14-16% in 2008 (or ~23-25% from peak to 2008)
WB (uses OFHEO index)	-12.90%
WFC	NA

Bank Forecasts Are More Optimistic About Peak to Trough Declines Than Case-Shiller Futures Market By:	
BAC	3%
C	13%
FNM	8-13%
FRE	13%
JPM	10-12%
WB (uses OFHEO index)	20%
WFC	NA

The Great Enabler: The Role of the Structured Products Markets in the US Housing Bubble



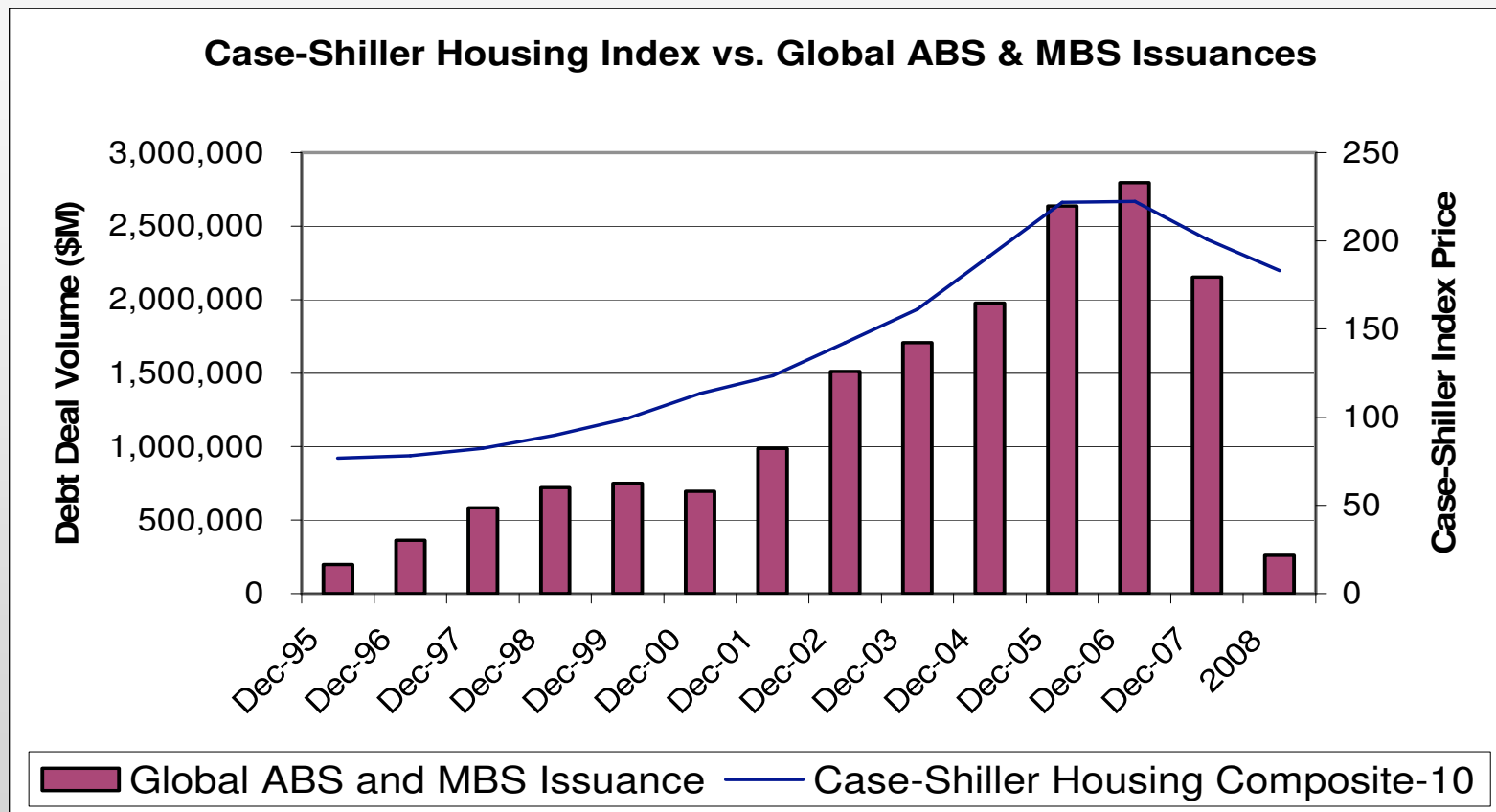
Quarterly Average Securitization Volume (\$m)	
1991 to 1995	9,796
1996 to 2000	59,681
2001 to 2004	174,408
2005 to 2007	208,283
4Q07	43,027
1Q08	33,518

Net Growth on balance sheet is for all commercial and savings institutions per SNL Financial.

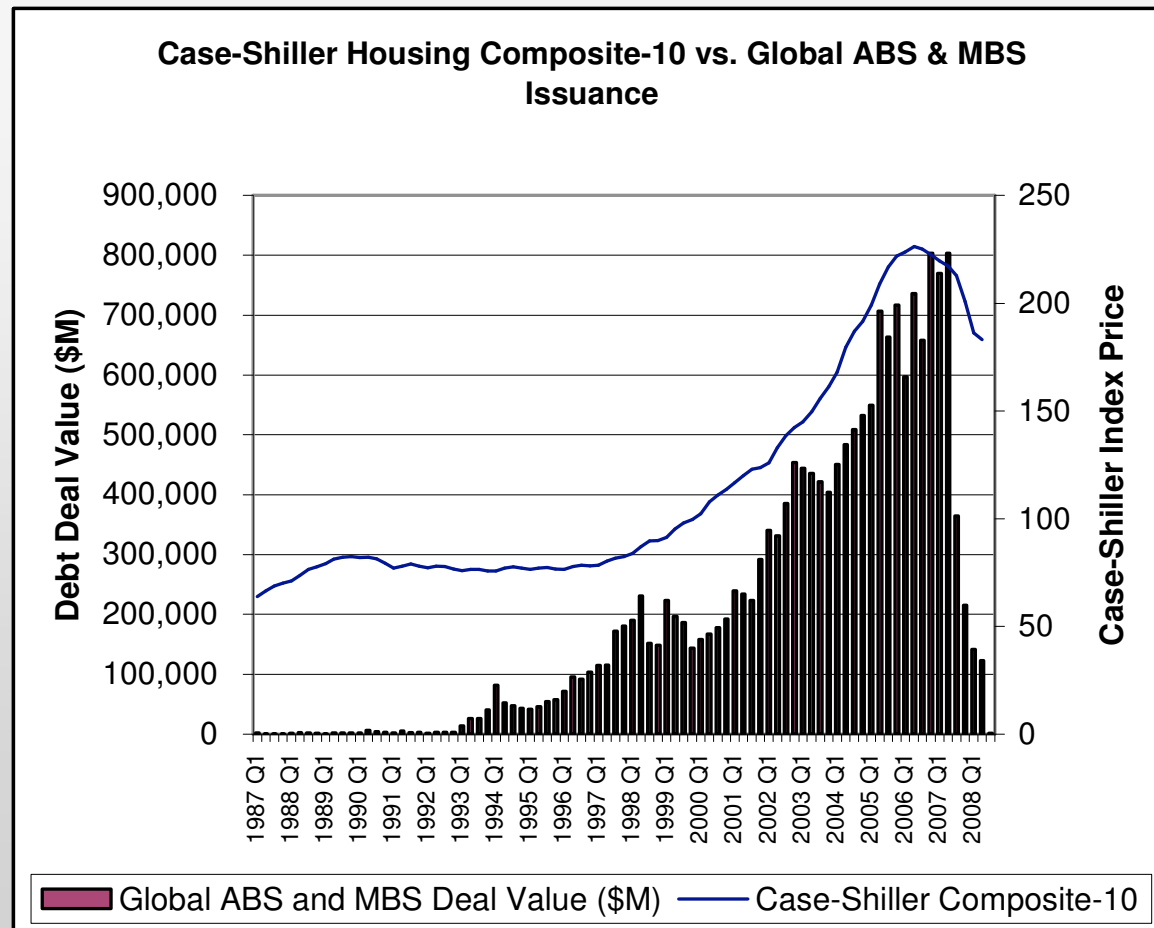
Source: Dealogic, SNL Financial and Oppenheimer & Co. Inc.

Year	Level (\$M)		YoY Change (\$M)		YoY Change		Securitization as X Balance Sheet
	Net Growth On Balance Sheet	Securitization Volume	Net Growth On Balance Sheet	Securitization Volume	Net Growth On Balance Sheet	Securitization Volume	
1991 to 1995	222,157	195,915	NA	NA	NA	NA	0.9x
1996 to 2000	255,514	1,193,629	33,357	997,714	15%	509%	4.7x
2001 to 2004	283,899	2,790,527	28,386	1,596,898	11%	134%	9.8x
2005 to 2007	431,374	2,499,402	147,475	(291,125)	52%	-10%	5.8x

Robust Securitization Volumes Drove Housing Prices Upwards, and Now the Shutdown in Securitization is the Main Driver Downwards

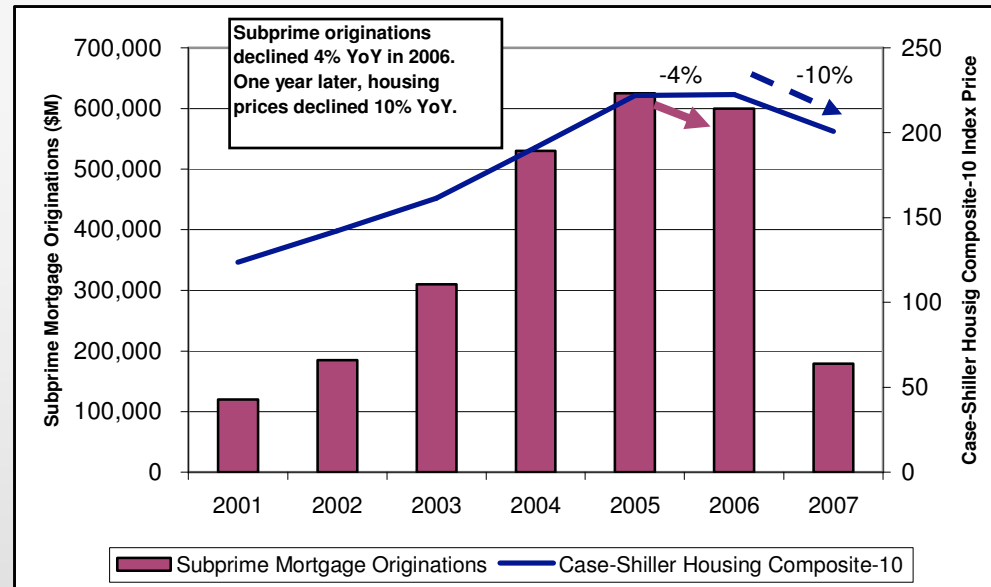


Robust Securitization Volumes Drove Housing Prices Upwards, and Now the Shutdown in Securitization is the Main Driver Downwards



Source: Standard & Poor's and Dealogic

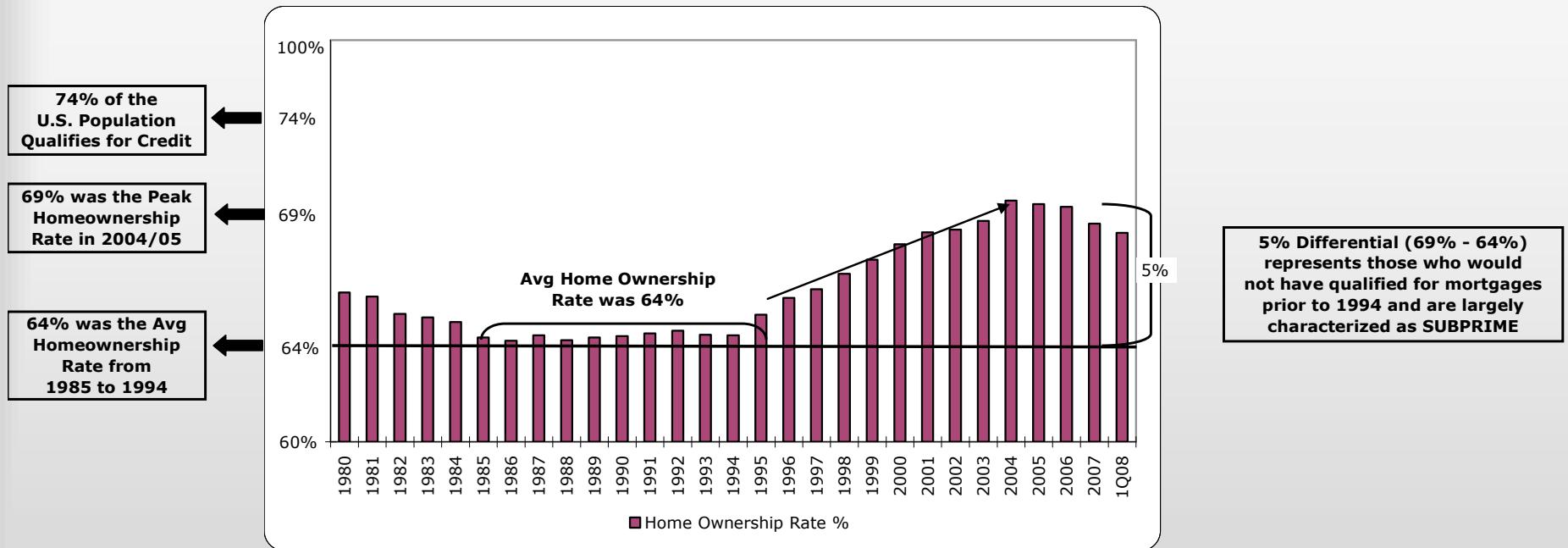
Decline in Subprime Origination Volumes Kicked Off the First Leg Down in Home Prices From 2006-2007



Year	Levels		Year-over-Year Change	
	Case-Shiller Housing Composite-10	Subprime Mortgage Originations (\$M)	Case-Shiller Housing Composite-10	Subprime Mortgage Originations
2001	123.64	120,000		
2002	142.18	185,000	15%	54%
2003	161.27	310,000	13%	68%
2004	191.42	530,000	19%	71%
2005	221.91	625,000	16%	18%
2006	222.39	600,000	0%	(4%)
2007	200.76	179,000	(10%)	(70%)

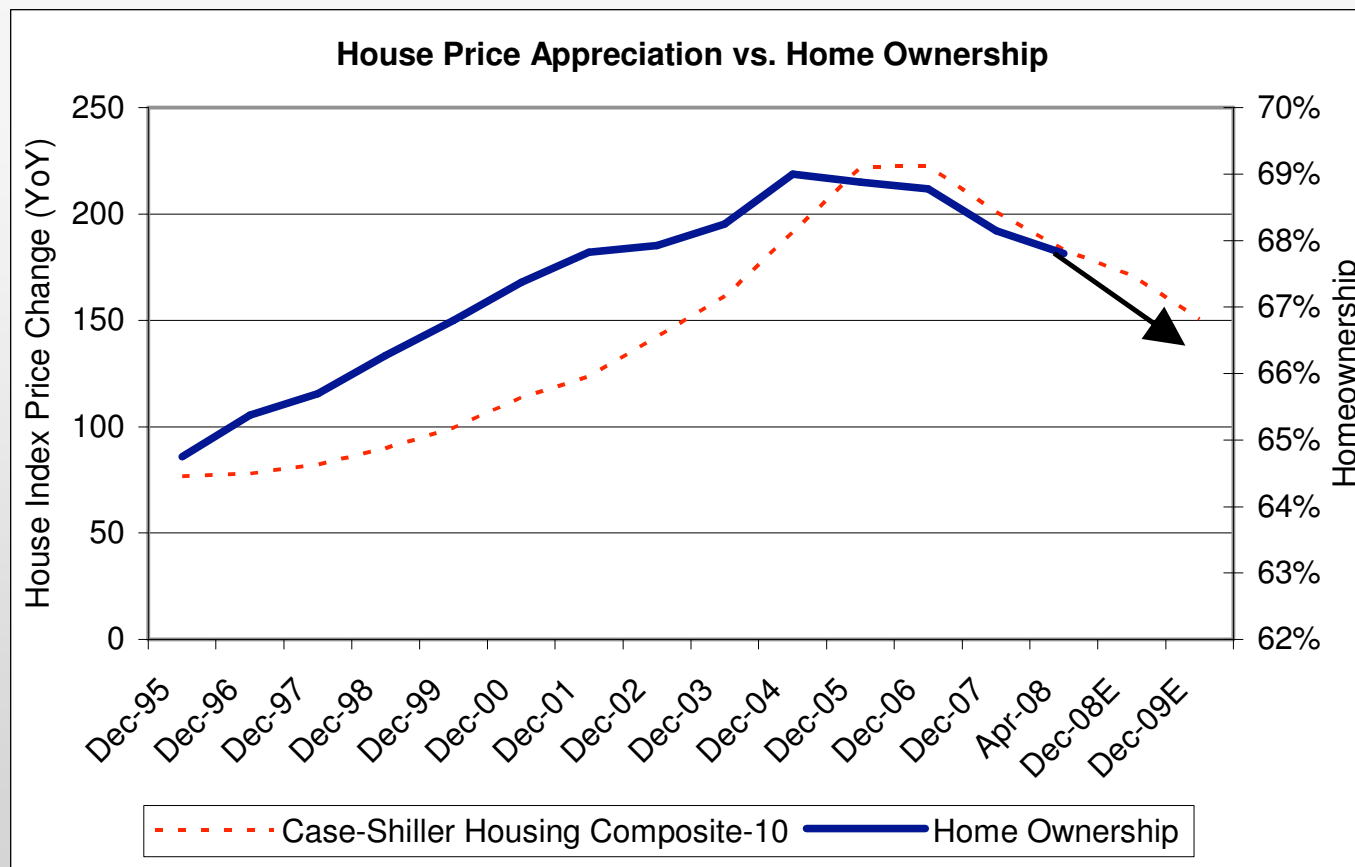
Source: Standard & Poor's, Inside Mortgages, and Fitch Ratings

Demand/Supply Market Turns Quickly Into Supply/Demand Market as Less Liquidity Is Driving Home Ownership as Well As House Prices Down



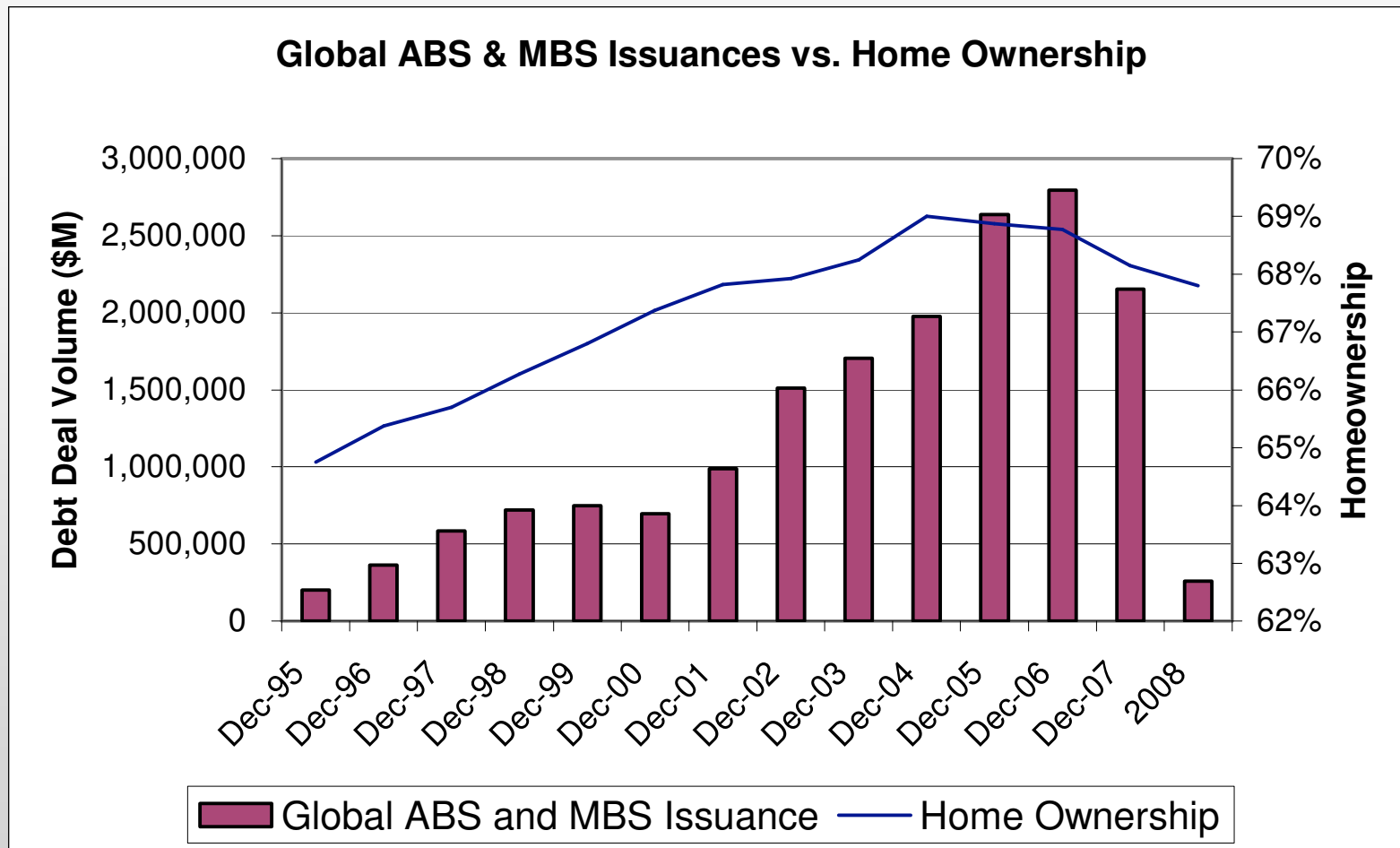
Source: U.S. Census Bureau and Oppenheimer & Co. Inc.

Case-Shiller Moves in Tandem With Homeownership Rates



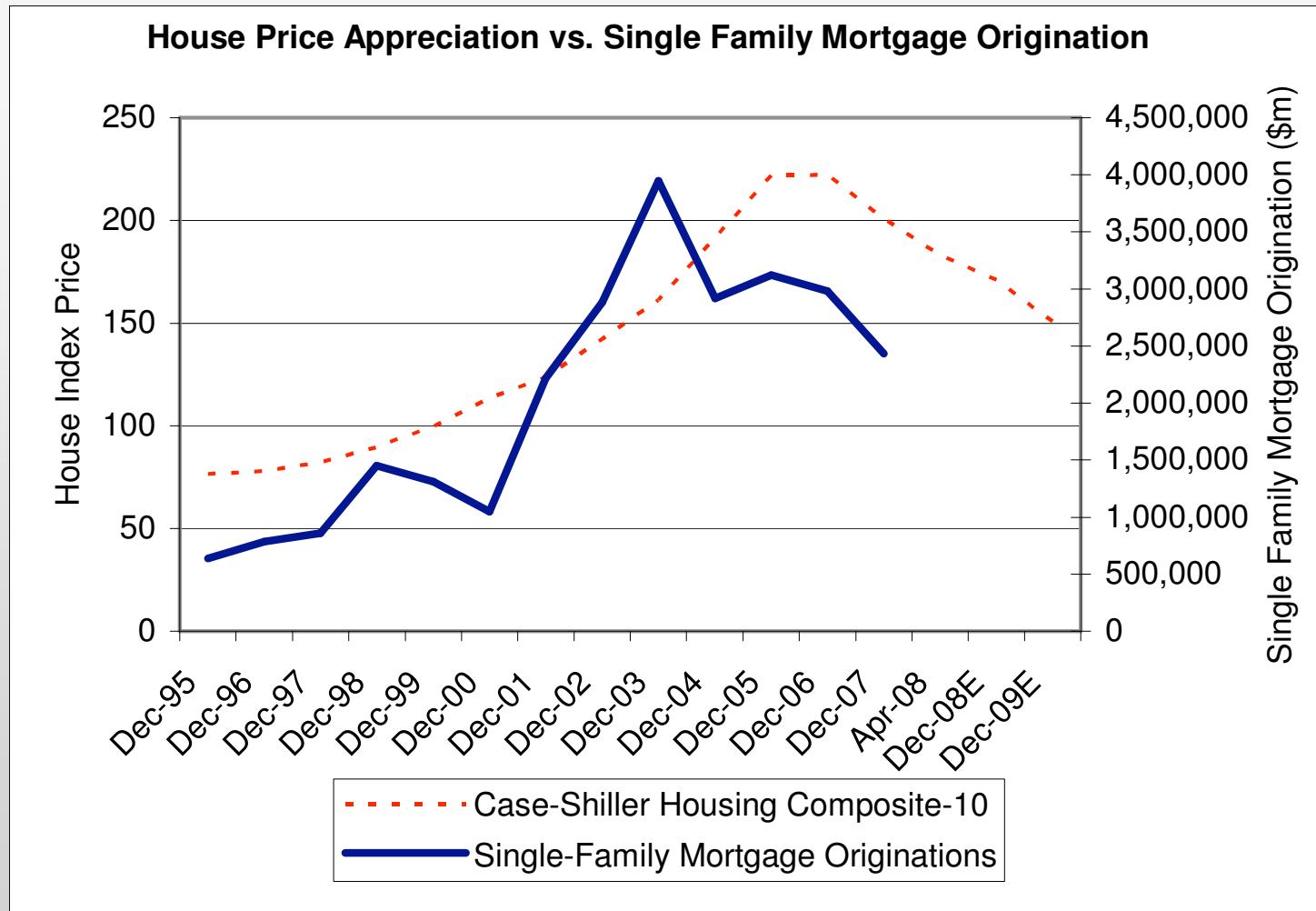
Source: Chicago Mercantile Exchange, Standard and Poor's, U.S. Census Bureau and Oppenheimer & Co. Inc..

Global Asset-Backed and Mortgage-Backed Securities Issuance vs. Home Ownership



Source: Dealogic, U.S. Census Bureau, and Oppenheimer & Co. Inc.

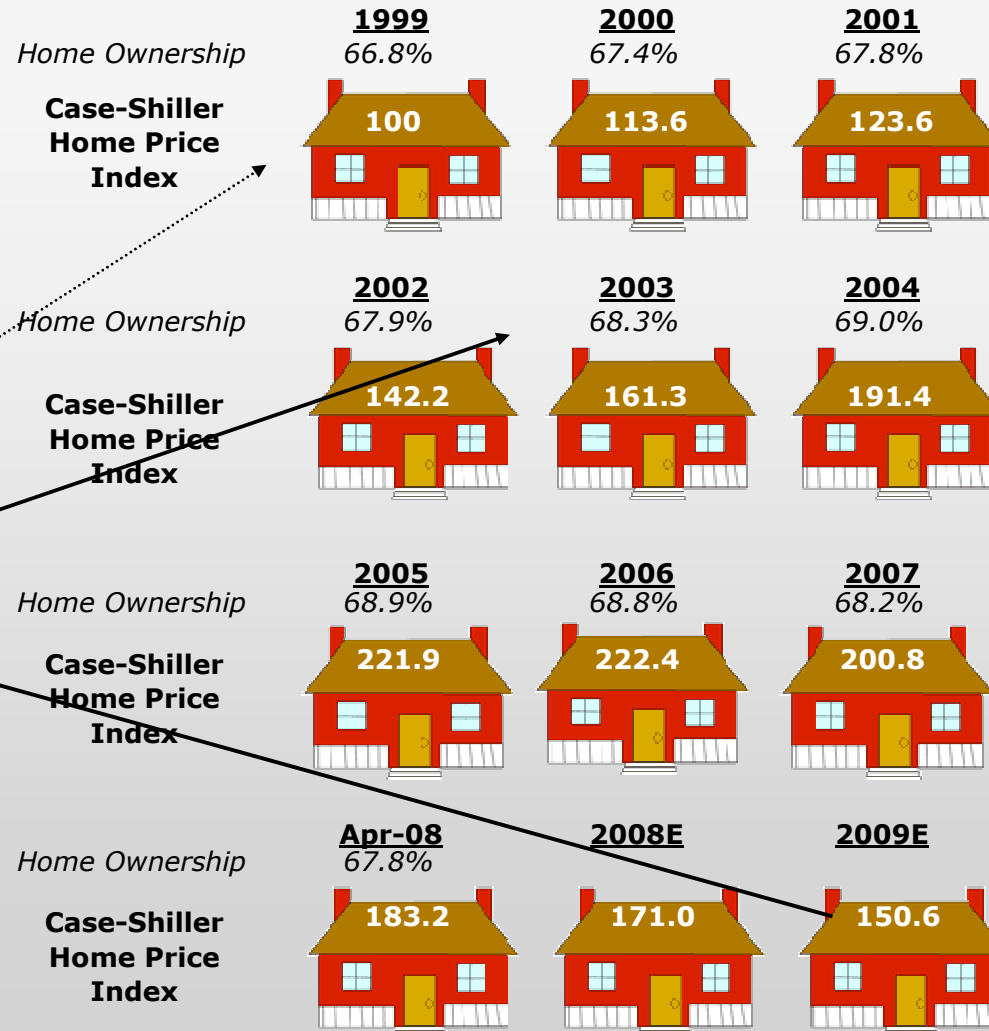
Case-Shiller vs. Single Family Mortgage Origination



Source: Chicago Mercantile Exchange, Standard and Poor's, OFHEO and Oppenheimer & Co. Inc.

Home Ownership and Appreciation from Case-Shiller's Starting Point of 100 in January 2000

Futures market prices HPA scenario returns to 2002/2003 levels. However, we argue this math does not work as the homeownership rate was higher then and the securitization market was providing all time new high levels of liquidity



E indicates estimates implied by the CME Housing Composite Futures

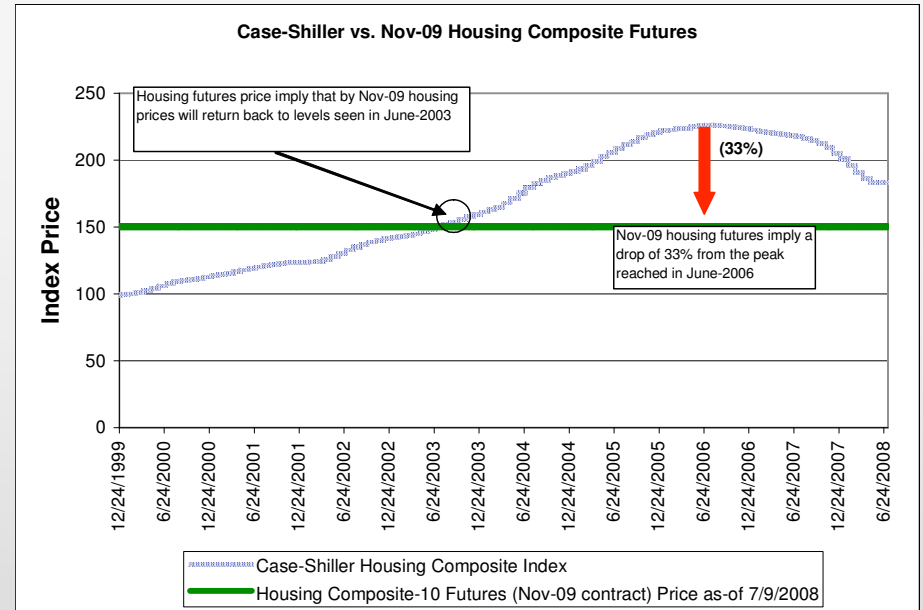
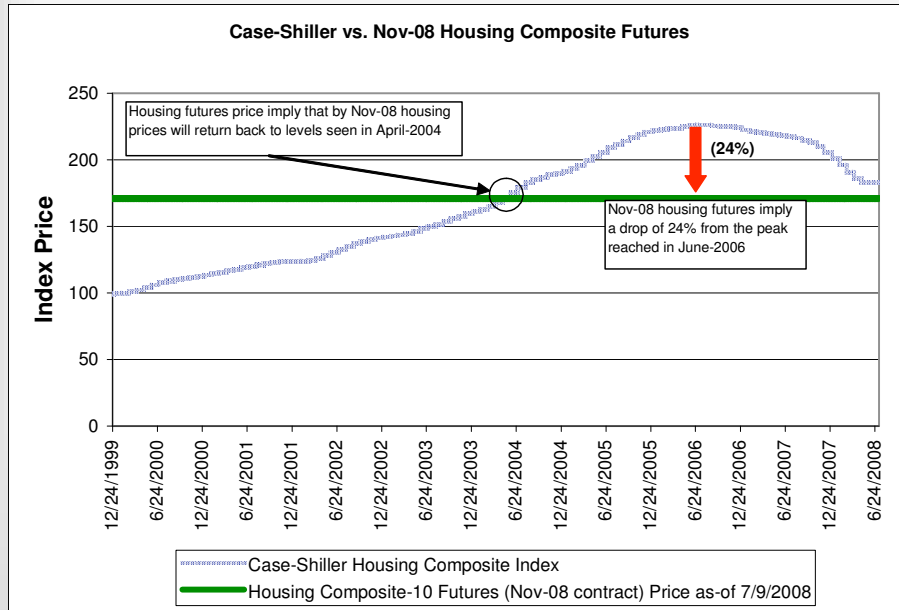
Source: Standard and Poor's, Chicago Mercantile Exchange, OFHEO and Oppenheimer & Co. Inc.

CME Housing Futures Liquidity

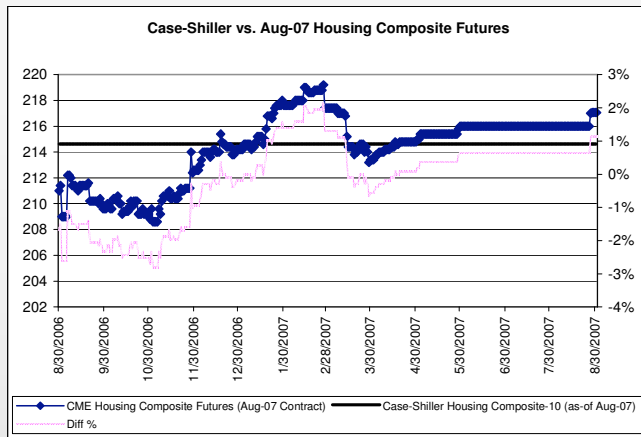
Housing Futures	Open Interest	Notional Outstanding
Boston	18	696,600
Chicago	43	1,547,450
CSI Housing Comp Futures	48	1,994,050
Denver	11	327,250
Las Vegas	48	1,745,550
Los Angeles	49	2,058,150
Miami	54	2,521,450
New York	66	3,008,150
San Diego	30	1,196,350
San Francisco	60	2,121,150
Washington D.C.	8	375,400
TOTAL	435	17,591,550

As-of: 7/9/2008

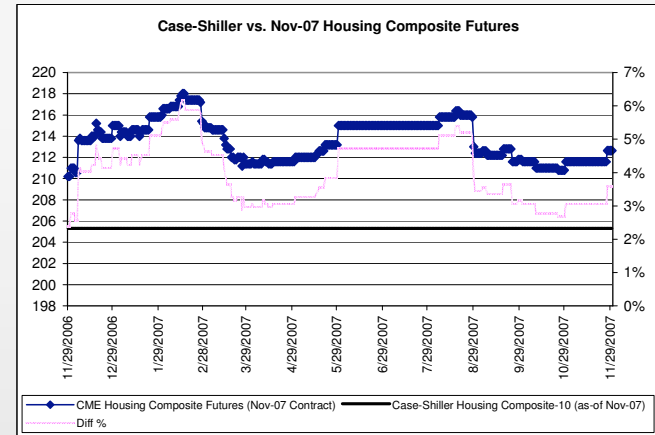
Case-Shiller Housing Composite-10 vs. Implied Housing Price Index Levels



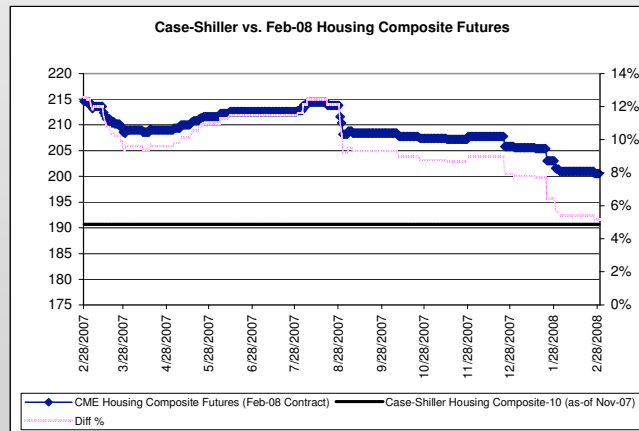
Case-Shiller Housing Composite-10 (Actual Prices) vs. CME Housing Composite Futures



Error Range
 High 2.1%
 Low -2.8%
 Average -0.1%

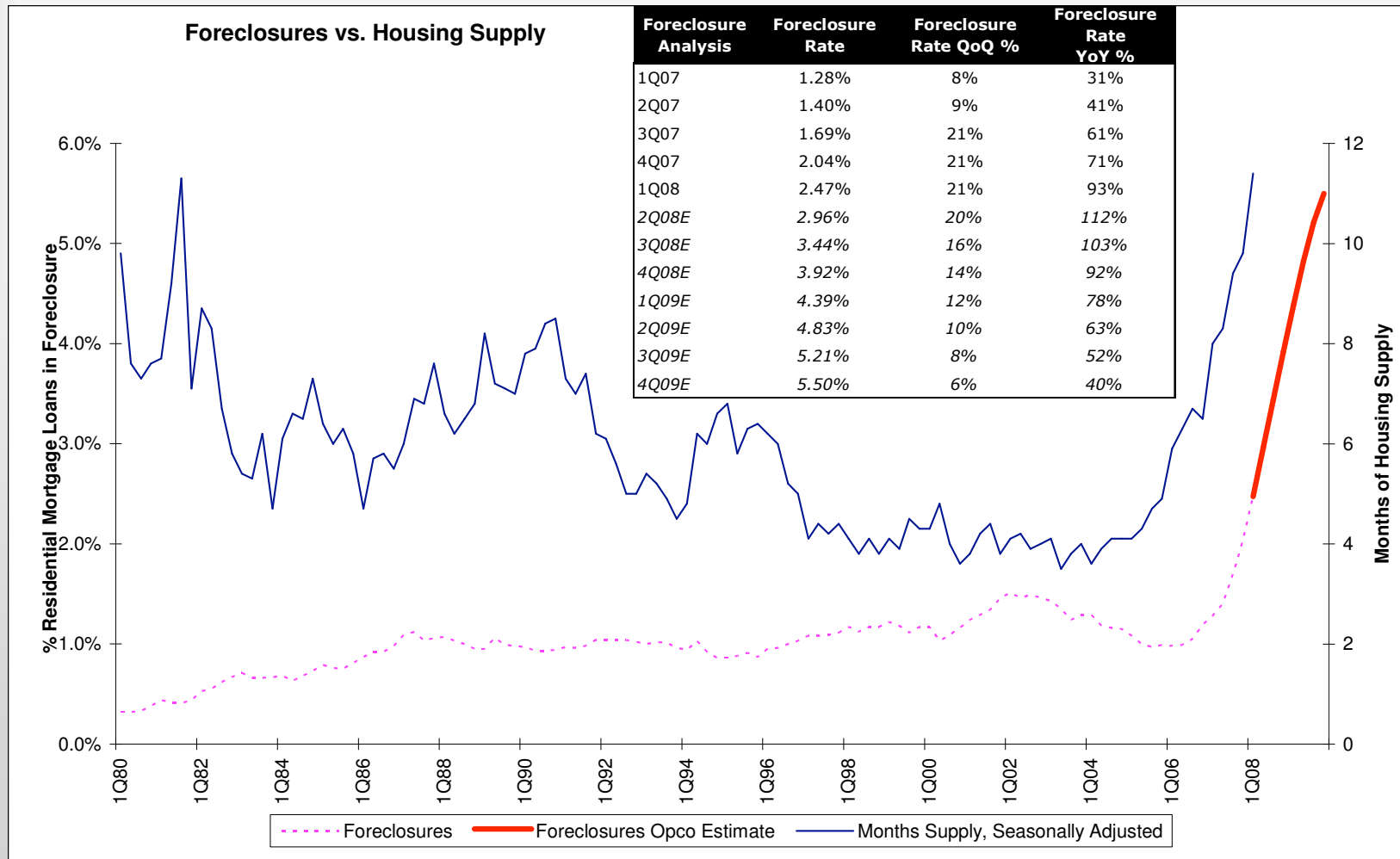


Error Range
 High 6.2%
 Low 2.4%
 Average 4.0%



Error Range
 High 12.5%
 Low 5.2%
 Average 9.6%

Foreclosures Continue To Rise, With Housing Supply



Bank Loan Books and Credit Quality as of 1Q08

Consumer Loans

Home Equity	Portfolio (\$b)	NCOs	Delinquencies
BAC	118	1.71%	1.33%
C	62	1.45%	3.16%
JPM	95	1.89%	3.99%
WB	60	0.47%	0.72%
WFC	84	2.34%	0.27%

Mortgage	Portfolio (\$b)	NCO	Delinquencies
BAC	266	0.10%	0.09%
C	151	1.00%	3.02%
JPM Prime	45	0.48%	5.64%
JPM Subprime	16	3.82%	~15.00%
WB Traditional	49	0.23%	1.15%
WB Pick-A-Pay	121	0.79%	3.82%
WFC	91	0.41%	0.35%

Managed Cards	Portfolio (\$b)	NCO	Delinquencies	Delinq. Days
BAC	184	5.19%	2.71%	90-day
C US	138	5.83%	1.57%	90-day
C INTL	32	4.99%	2.29%	90-day
JPM	151	4.37%	1.84%	90-day
WFC	19	5.89%	2.36%	90-day

Auto	Portfolio (\$b)	NCO	Delinquencies
C	17	3.40%	0.69%
JPM	47	1.10%	1.44%
WB	26	2.31%	0.25%

Commercial Loans

CRE	Portfolio (\$b)	NCO	Delinquencies
BAC	63	0.70%	0.36%
C	24	NA	NA
JPM ¹	15	3.51%	2.44%
WB	48	1.10%	3.95%
WFC	56	0.22%	0.07%

¹ JPM: Category is Commercial Real Estate Banking per 1Q08 Earnings Presentation

C&I (mix varies by company)	Portfolio (\$b)	NCOs	Delinquencies
BAC	219	0.14%	0.09%
JPM ²	68	0.48%	0.66%
WB	119	0.39%	0.76%
WFC	91	1.01%	0.03%

²JPM: Includes Middle Market Banking, Mid-Corporate Banking, and Real Estate Bankin

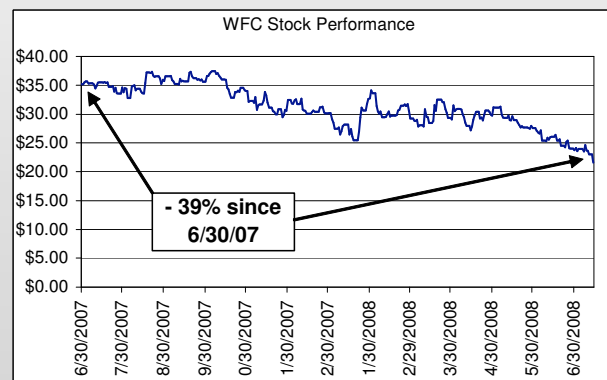
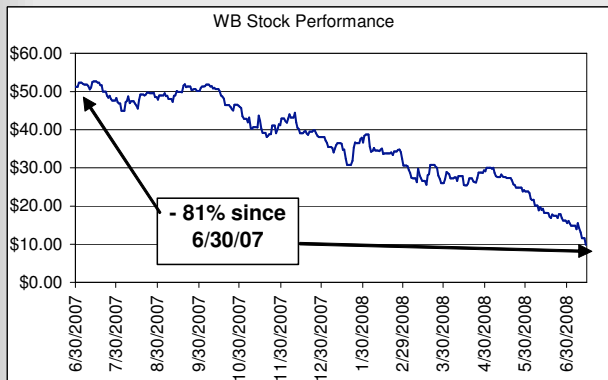
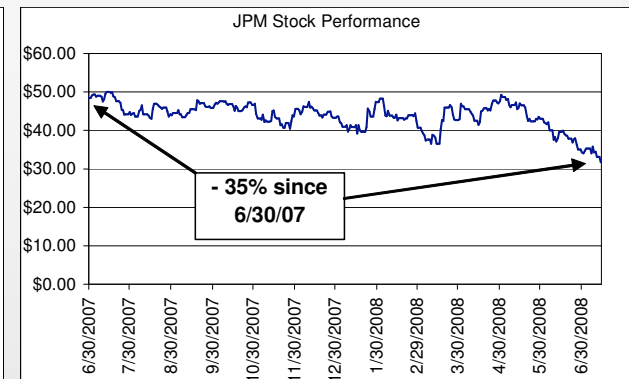
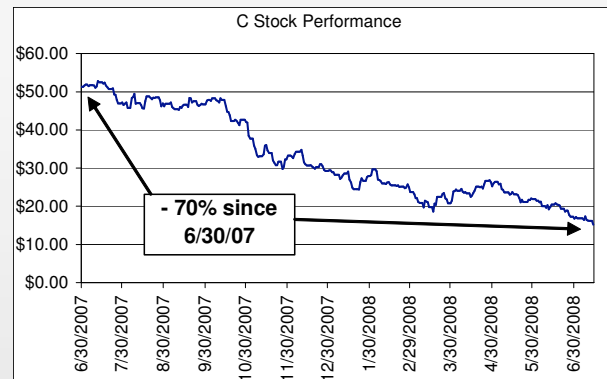
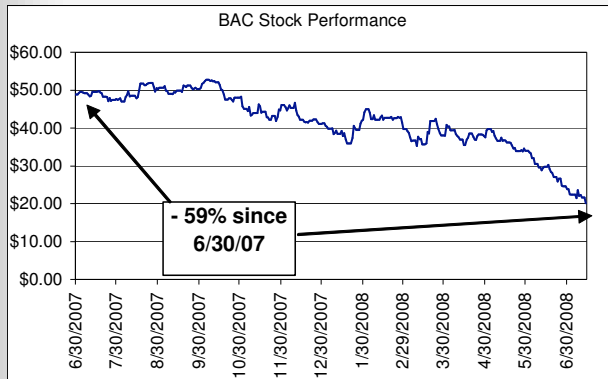
Small Biz	Portfolio (\$b)	NCO	Delinquencies
BAC	20	7.21%	2.72%

Commercial Lease	Portfolio (\$b)	NCO	Delinquencies
BAC	22	0.27%	0.14%
WFC	7	0.53%	NA

3Q07 to 1Q08 Bank Capital

3Q07 to 1Q08 (\$b)	Capital Raised	Writedowns	Provision	Net
BAC	20.9	-12.5	-11.4	-3.0
C	43.4	-49.2	-18.1	-23.9
JPM	10.0	-5.3	-8.8	-4.0
WB	14.7	-6.1	-4.7	3.9
WFC	5.1	0.0	-5.5	-0.5

Historical Stock Performance



Historical Valuation Analysis

Current P/B and P/TB vs. 1990-1991 Credit Cycle

	Current Price	Current BV	Current P/B	P/B Min	P/B Max	Current TBV	Current P/TB	P/TB Min	P/TB Max	1990-1991 Cycle Multiples Applied to Current BV and TBV			
										Price Min on P/B	Price Max on P/B	Price Min on P/TB	Price Max on P/TB
BAC	20.15	31.22	0.6x	0.6x	1.6x	12.62	1.6x	0.9x	1.7x	18.40	48.85	11.30	21.69
C	15.22	20.73	0.7x	0.4x	0.9x	10.20	1.5x	0.4x	1.1x	8.00	19.36	4.51	11.05
JPM	31.69	36.94	0.9x	0.4x	1.1x	22.38	1.4x	0.4x	1.1x	14.93	41.36	9.05	25.06
WB	9.84	36.40	0.3x	0.7x	1.4x	13.60	0.7x	1.8x	2.2x	24.61	52.62	23.89	29.95
WFC	21.57	14.58	1.5x	0.9x	2.1x	10.28	2.1x	NA	NA	13.62	30.65	NA	NA

Current P/B and P/TB vs. 2001-2003 Credit Cycle

	Current Price	Current BV	Current P/B	P/B Min	P/B Max	Current TBV	Current P/TB	P/TB Min	P/TB Max	2001-2003 Cycle Multiples Applied to Current BV and TBV			
										Price Min on P/B	Price Max on P/B	Price Min on P/TB	Price Max on P/TB
BAC	20.15	31.22	0.6x	1.6x	2.5x	12.62	1.6x	2.4x	3.7x	48.60	77.08	30.40	47.14
C	15.22	20.73	0.7x	1.6x	4.4x	10.20	1.5x	2.7x	5.7x	33.76	90.93	27.11	58.28
JPM	31.69	36.94	0.9x	0.7x	2.6x	22.38	1.4x	1.1x	4.3x	26.85	97.75	23.74	96.75
WB	9.84	36.40	0.3x	1.2x	2.2x	13.60	0.7x	2.0x	3.4x	44.76	80.34	27.36	45.76
WFC	21.57	14.58	1.5x	2.4x	3.6x	10.28	2.1x	3.8x	6.1x	35.71	53.09	38.74	63.05

Current P/B and P/TB vs. 1990-2008

	Current Price	Current BV	Current P/B	P/B Min	P/B Max	Current TBV	Current P/TB	P/TB Min	P/TB Max	1990-2008 Multiples Applied to Current BV and TBV			
										Price Min on P/B	Price Max on P/B	Price Min on P/TB	Price Max on P/TB
BAC	20.15	31.22	0.6x	0.6x	3.3x	12.62	1.6x	0.9x	5.1x	18.40	102.18	11.30	64.38
C	15.22	20.73	0.7x	0.4x	5.3x	10.20	1.5x	0.4x	5.7x	8.00	109.15	4.51	58.28
JPM	31.69	36.94	0.9x	0.4x	3.6x	22.38	1.4x	0.4x	5.1x	14.93	134.33	9.05	114.31
WB	9.84	36.40	0.3x	0.3x	4.0x	13.60	0.7x	0.7x	5.8x	9.88	144.41	9.84	78.52
WFC	21.57	14.58	1.5x	0.9x	4.4x	10.28	2.1x	2.1x	7.2x	13.62	64.16	21.21	73.89

Current P/B and P/TB vs. 2003-2008

	Current Price	Current BV	Current P/B	P/B Min	P/B Max	Current TBV	Current P/TB	P/TB Min	P/TB Max	2003-08 Multiples Applied to Current BV and TBV			
										Price Min on P/B	Price Max on P/B	Price Min on P/TB	Price Max on P/TB
BAC	20.15	31.22	0.6x	0.6x	2.5x	12.62	1.6x	1.6x	5.1x	20.15	77.69	20.15	63.90
C	15.22	20.73	0.7x	0.7x	2.8x	10.20	1.5x	1.5x	4.8x	15.22	57.31	15.17	49.29
JPM	31.69	36.94	0.9x	0.9x	1.9x	22.38	1.4x	1.4x	3.3x	31.69	71.89	31.69	74.26
WB	9.84	36.40	0.3x	0.3x	2.1x	13.60	0.7x	0.7x	3.9x	9.88	76.58	9.84	52.74
WFC	21.57	14.58	1.5x	1.5x	3.1x	10.28	2.1x	2.1x	4.6x	21.57	44.65	21.57	46.97

Comp Table and Ratings

	BAC	C	JPM	WB	WFC
Stock Price	20.15	15.22	31.69	9.84	21.57
Opco FY2008E EPS	2.19	-2.15	1.80	-1.35	1.20
Opco FY2009E EPS	2.90	0.45	1.80	-0.35	1.90
P / Opco FY2008E	9.2x	nm	17.6x	nm	18.0x
P / Opco FY2009E	6.9x	33.8x	17.6x	nm	11.4x
Consensus FY2008E EPS	2.41	-0.66	2.58	1.27	2.14
Consensus FY2009E EPS	3.53	2.49	3.40	2.40	2.43
P / Consensus FY2008E	8.4x	nm	12.3x	7.7x	10.1x
P / Consensus FY2009E	5.7x	6.1x	9.3x	4.1x	8.9x
2003-2007 Avg Forward P/E	11.1x	11.8x	11.9x	11.9x	13.5x
Book Value	31.22	20.73	36.94	36.40	14.45
Price / Book	0.6x	0.7x	0.9x	0.3x	1.5x
Tangible Book Value	12.62	10.20	22.38	13.60	10.28
Price / Tangible Book	1.6x	1.5x	1.4x	0.7x	2.1x

Company	Ticker	Opco Rating	Stock Price
Bank of America	BAC	Perform	20.15
Citigroup	C	Underperform	15.22
JP Morgan	JPM	Perform	31.69
Wachovia	WB	Underperform	9.84
Wells Fargo	WFC	Underperform	21.57

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